

ICS 13.060

CCS P 40



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

GB/T 19772-2026

Replacing GB/T 19772-2005

**Municipal wastewater reclamation and reuse - Water quality
standard for groundwater recharge**

城镇污水再生利用 地下水回补水质

Issued on: May 25, 2026

Implemented on: December 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

4 Technical Requirements

4.1 Selection of replenishment method

4.2 Water quality control at the inlet of the replenishment area

5.4 Online monitoring requirements

6 Groundwater Sampling and Monitoring in the Replenishment Zone

6.1 Monitoring Site Layout

6.2 Monitoring and Sampling Requirements

7 Water quality testing and analysis methods

Foreword

GB/T 19772-2026 | Municipal wastewater reclamation and reuse - Water quality standard for groundwater recharge

GB/T 19772-2026 English version. Municipal wastewater reclamation and reuse - Water quality standard for groundwater recharge ICS

40 National Standards of the People's Republic of China Replaces GB/T 19772-2005 Urban wastewater reuse and groundwater replenishment Published on 2026-05-

25 Implemented on December 1, 2026 State Administration for Market Regulation The State Administration for Standardization issued a statement.

1.Scope This document specifies the controllable indicators and their limits, as well as the sampling and monitoring of reclaimed water, when using urban wastewater for groundwater replenishment. Methods for groundwater sampling and monitoring, and water quality testing and analysis in the recharge area. This document applies to water sources that use urban wastewater reclaimed water as a source, located outside drinking water source protection zones and quasi-protection zones, for non-drinking purposes. Water quality requirements for groundwater replenishment through surface infiltration or well irrigation.

4.1 Selection of replenishment method

4.1.1 The use of urban wastewater reclaimed water for groundwater replenishment should be based on a groundwater replenishment suitability assessment and according to the hydrological conditions of the replenishment area. Choose a reasonable replenishment method based on the quality conditions and environmental circumstances.

4.1.2 Surface infiltration should be given priority if it does not affect the groundwater quality

and its function in the recharge area.

4.2 Water quality control at the inlet of the replenishment area

4.2.1 During recharge, the water quality control indicators at the inlet of the recharge area are divided into two categories. basic control indicators and optional control indicators. Basic control indicators... The requirements in Table 1 should be met. The selected control indicators should meet the requirements in Table 2.

4.2.2 Before replenishment, the basic control indicators and selected control indicators of the replenishment water source should be comprehensively tested to ensure they meet the requirements of Tables 1 and 2. Replenishment can be carried out; the indicators detected in Table 2 will be selected as control indicators for the replenishment period.

4.2.3 If the quality of the replenished water may change due to factors such as the source of urban sewage or the reclaimed water treatment process, replenishment should be stopped immediately, and the water quality should be re-evaluated. The basic and selected control indicators of the water replenishment source were comprehensively tested, and the selected control indicators were redefined.

4.3 Groundwater retention time before replenishment water is extracted and utilized

4.3.1 Before being extracted and utilized, replenished water should remain underground for a sufficient period of time to further kill pathogenic microorganisms and ensure hygiene and safety.

4.3.2 The replenishment should be carried out by surface infiltration. The replenishment water should remain underground for more than 6 months before being extracted and used.

4.3.3 When using well irrigation for replenishment, the replenished water should remain underground for more than 12 months before being extracted and used.

5.4 Online monitoring requirements

5.4.1 Key indicators such as flow rate, water temperature, turbidity, conductivity, pH, chemical oxygen demand (COD), and ammonia nitrogen (as N) should be monitored online.

5.4.2 The installation, acceptance, operation, and data validity assessment of online monitoring equipment shall be conducted in accordance with HJ353, HJ354, HJ355, and HJ... 356 shall be executed and shall comply with the provisions of CJ/T 252 and HJ101.

5.4.3 When the online monitoring data of flow rate, water temperature, and conductivity are abnormal, the cause should be identified in a timely manner and countermeasures should be taken.

6.1 Monitoring Site Layout

6.1.1 Groundwater quality and level monitoring wells should be installed in the recharge area, including regional groundwater quality and level monitoring wells, background wells, and recharge operation wells. Water quality and water level monitoring well.

6.1.2 The monitoring wells for regional groundwater quality and level should be selected in conjunction with groundwater recharge points, recharge methods, groundwater flow fields, and hydrogeological conditions. The site setup, in principle, should be located within 2 km downstream of the groundwater inlet in the recharge area, along the direction of groundwater flow, with a minimum of two such sites; regional groundwater... One background water quality monitoring well should be installed upstream of the inlet in the replenishment area; one monitoring well should be installed at the inlet in the replenishment area. There must be at least two such locations within a 100-meter radius.

6.2 Monitoring and Sampling Requirements

6.2.1 Before recharge, a comprehensive baseline monitoring of groundwater quality in the recharge area should be conducted. Monitoring indicators include basic control indicators and selected control indicators. And reference indicators (see Appendix A).

6.2.2 During the recharge process, the groundwater level, basic control indicators, determined selection control indicators, and reference indicators in the recharge area should be monitored regularly. Wastewater chemical indicators (potassium, calcium, magnesium, bicarbonate, carbonate, free carbon dioxide, etc.) are monitored. This is based on the environmental conditions of the recharge area and... Based on actual engineering needs, the indicators for trace new pollutants and microbial safety can be appropriately increased.

6.2.3 During the recharge process, groundwater quality trends should be analyzed regularly. If water quality is found to exceed standards or show a deteriorating trend, recharge should be stopped immediately. Supplement and take corresponding countermeasures.

6.2.4 Groundwater sampling for monitoring shall be carried out in accordance with HJ164, and the preservation and submission of groundwater samples for testing shall comply with GB/T 14848. implement.

6.3 Monitoring Frequency Requirements During the operation of the recharge project, the frequency of groundwater monitoring in the recharge area should not be lower than the requirements in Table 4, and the reference indicators should be monitored once every six months.

6.4 Online monitoring requirements Groundwater level, water temperature, pH, conductivity, chemical oxygen demand (COD), permanganate index (as O₂), nitrate (as N), and Key

indicators such as ammonia nitrogen (calculated as N) should be monitored online.

7 Water quality testing and analysis methods

7.1 Water quality testing and analysis methods shall be performed in accordance with relevant national or industry standards. The water quality testing and analysis methods recommended in this document are listed below. Appendix B.

7.2 If the applicability analysis confirms its reliability, other equivalent detection and analysis methods may also be used.