



Present Situation, Challenges and Counter-measures of Urban Water Development in China

Xin Chen

Department of Energy Efficiency in Buildings and Science.& Technology

Ministry of Housing and Urban-Rural Development P. R. China

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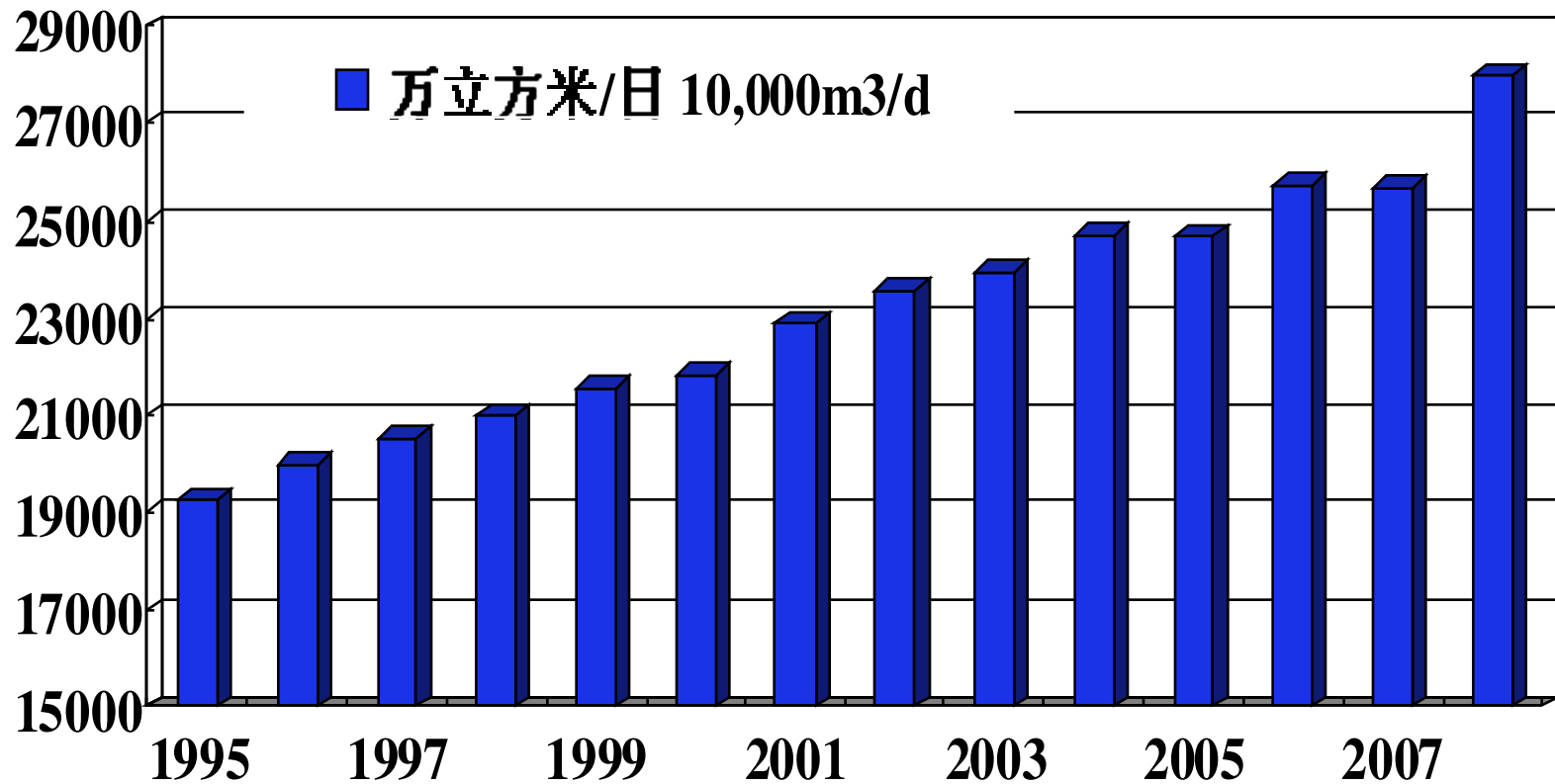


Development of Urban Water supply Infrastructure (655 cities)



❖ **Total capacity of water supply has maintained a sustained growth**

In 2008: 280million m³/day, an increase of 46% (1995 to 2008)



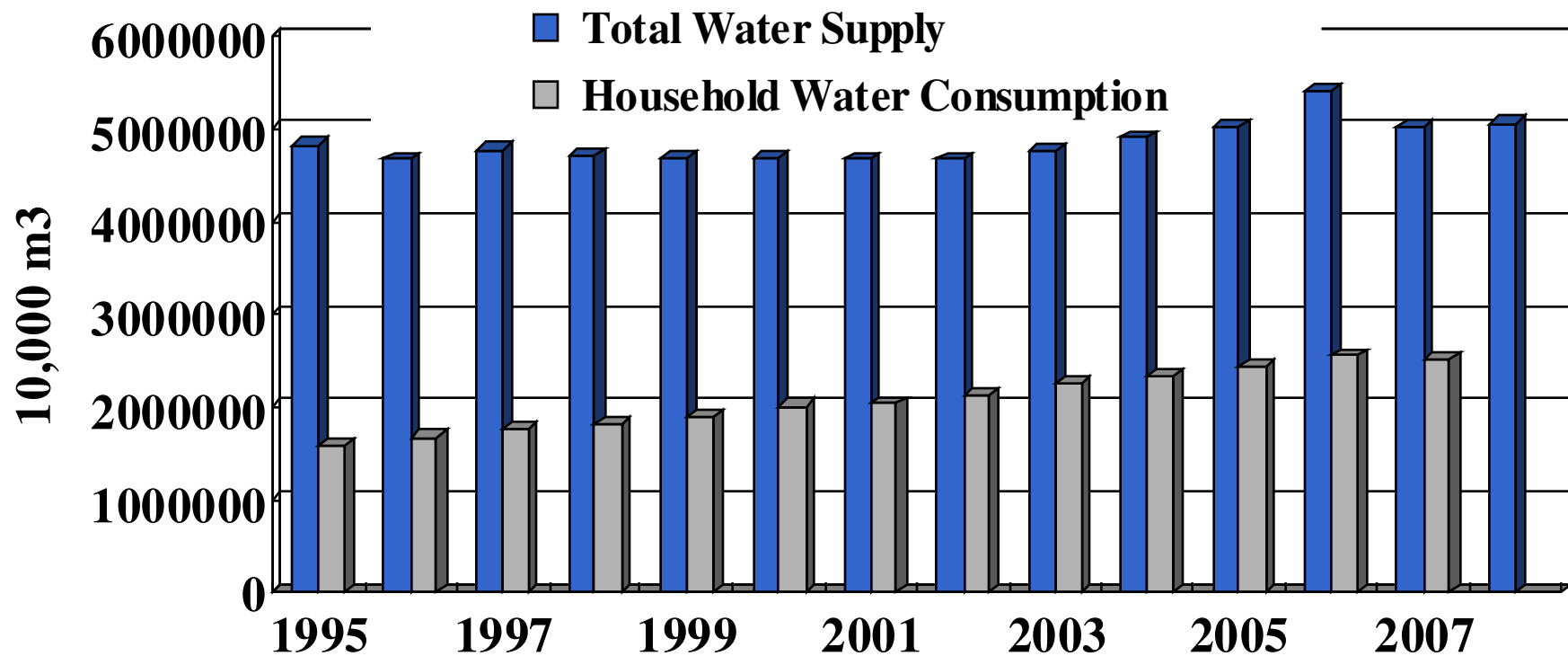


❖ Total water supply volume generally kept steady

In 2008: 50.5 billion m³, a rise of 4.8% on 1995 level

❖ Domestic water consumption volume continued to rise

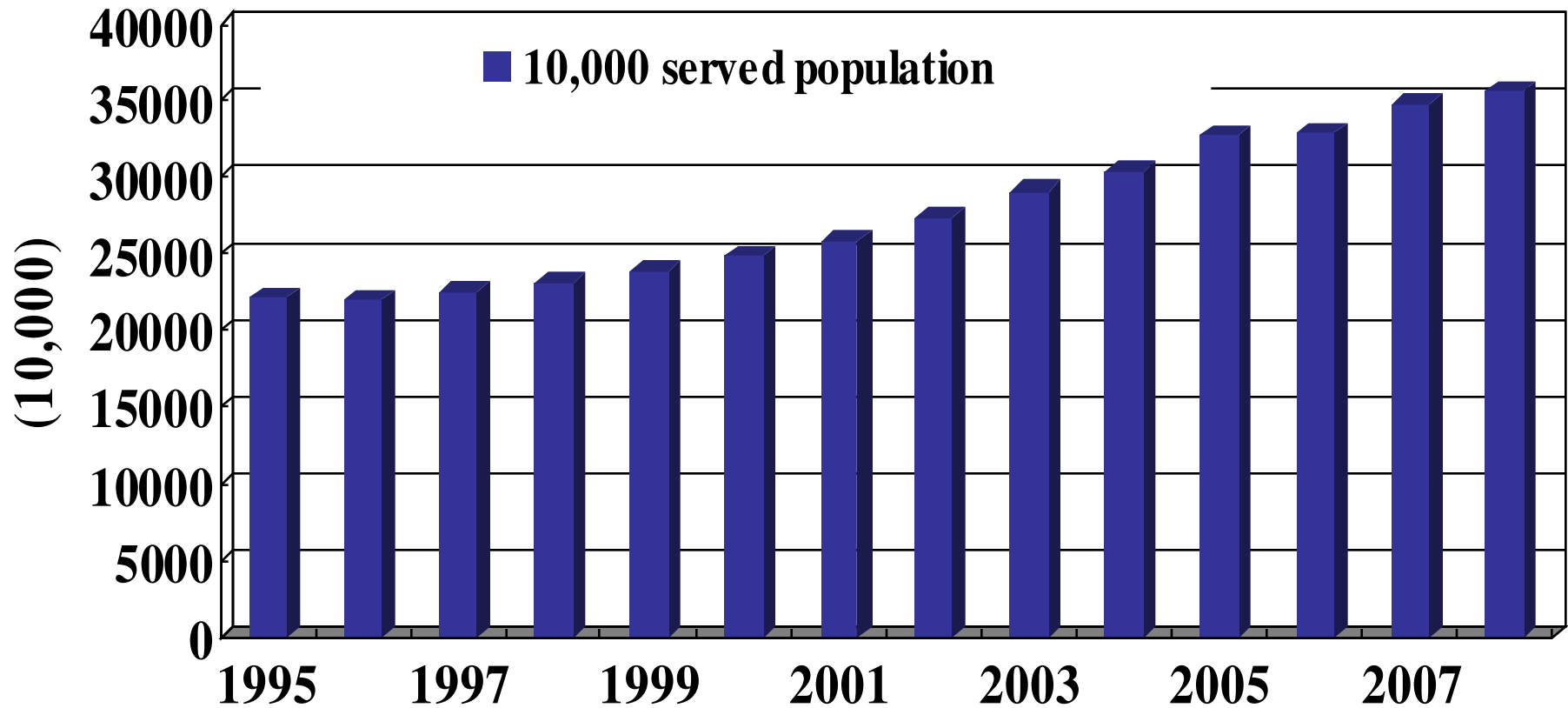
In 2007: 25.1 billion m³, a rise of 58.9% on 1995 level





➤ **Service Population has grown in the period from 1995 to 2008**

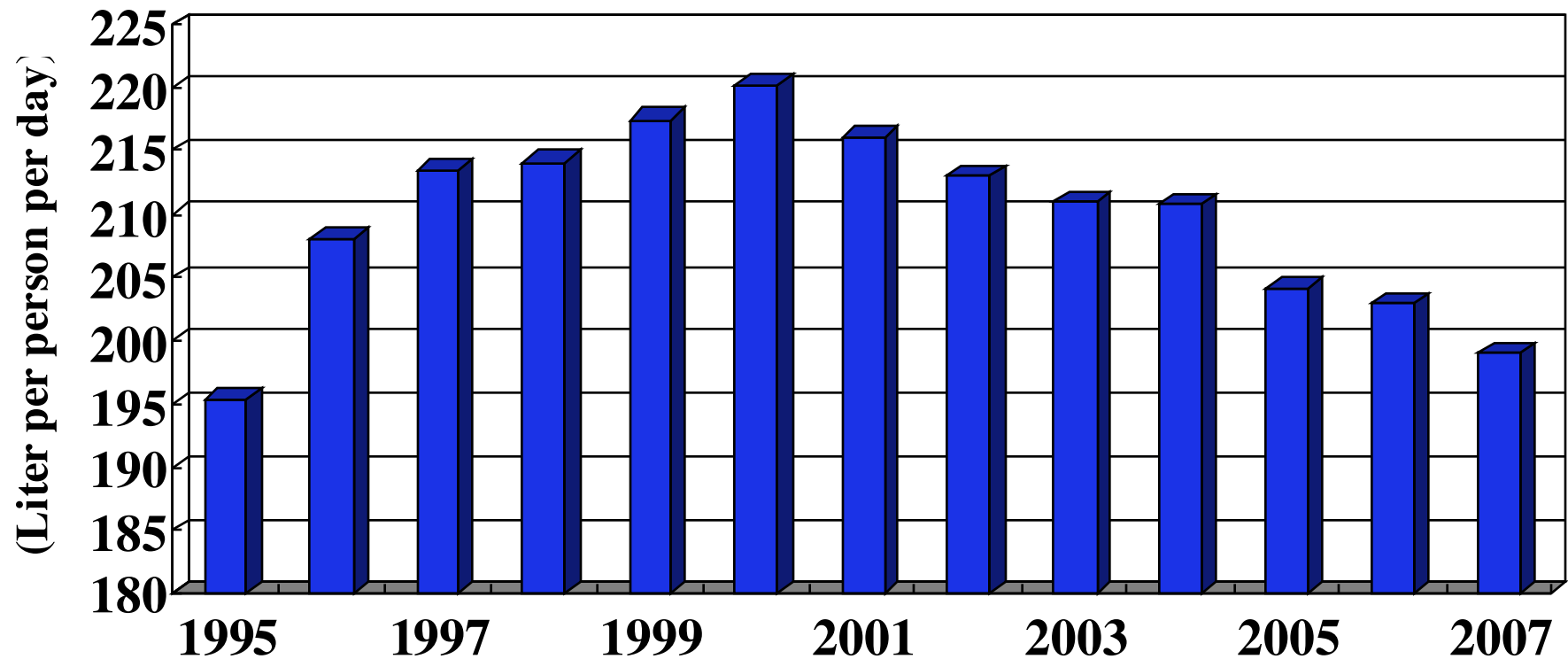
Service population in 2008: 360 million, a 58% increase (1995 to 2008)





❖ Per-Capita Domestic Water Consumption Volume

continued to rise in the period of 1995-2000, and then kept a decrease trend to 199 L/p in 2007 (decreasing 9.6% compared to that in 2000), as a result of that water conservation management has made a positive contribution to improve water-use efficiency.





❖ **Upgrading of urban water supply system: driven by quantitative and qualitative demands**

- High speed of urbanization and industrialization results in increasing demand for urban water supply
- Urban water supply systems need to be upgraded
Source water quality is threatened by water pollution.
Demand for high quality drinking water is increasing.



❖ **Demands for development of urban water supply sector**

Economic and technologic demands:

- ❖ Technical innovation for implementation of advanced treatment facilities
- ❖ Extending water supply services to rural areas
- ❖ Water distribution network renewal and replacement

More than 300 billion RMB are needed for investing urban water supply projects in the 11th FYP – aiming at drinking water quality improvement through system upgrading and innovation



To solve the main problems related to urban water supply

- ❖ Innovation of conventional treatment processes
- ❖ Implementation of advanced treatment facilities to cope with source water pollution
- ❖ Renewal of old water networks
- ❖ Elimination of the hidden danger of secondary pollution
- ❖ Enhancement of water supply system monitoring and surveillance

To ensure safe drinking water supply in all cities and towns before 2012 to meet the new drinking water quality standard

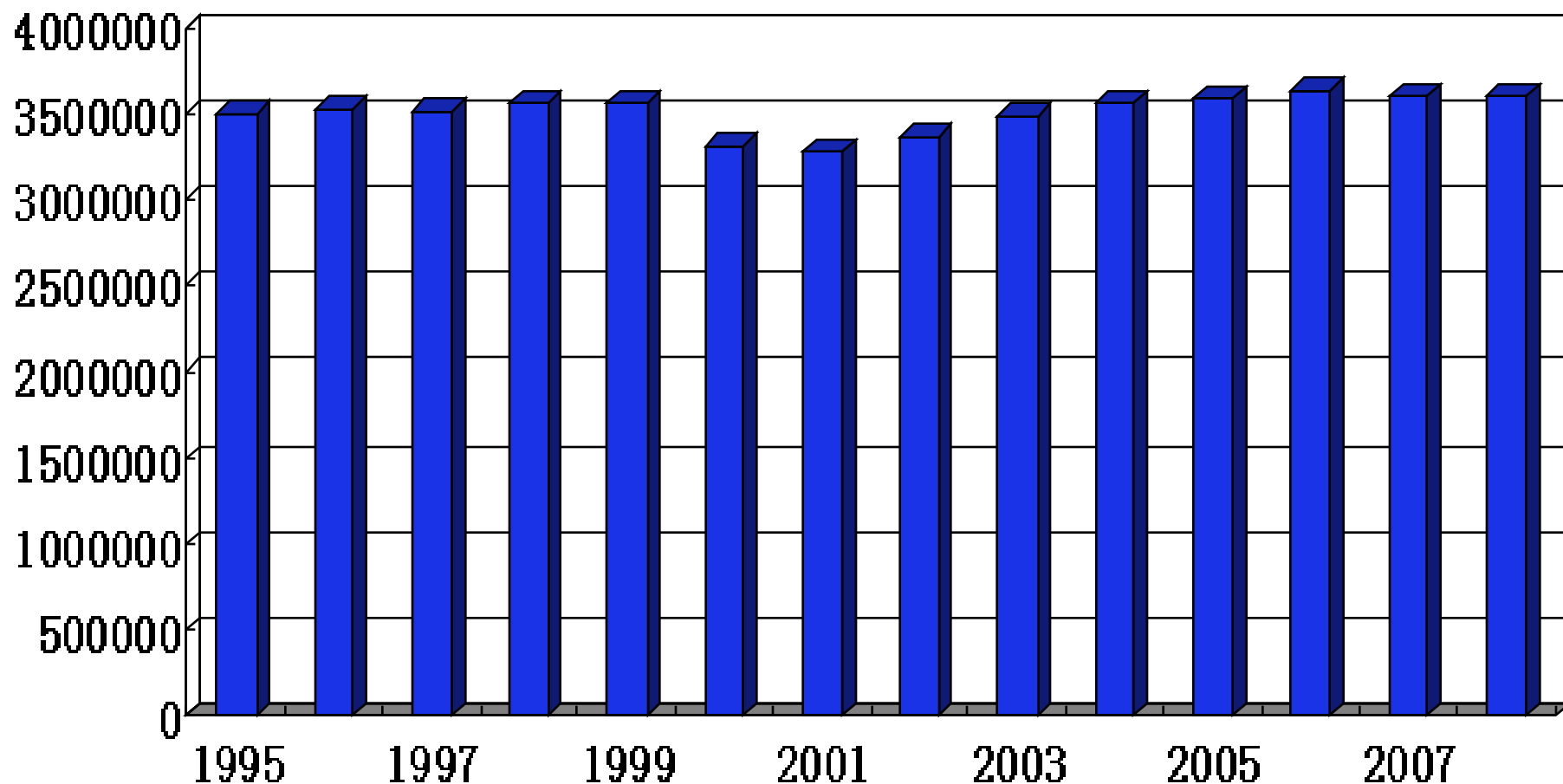


Development of Municipal Wastewater Infrastructure (655 cities)



❖ Total volume of wastewater kept steady in the period of 1995-2008

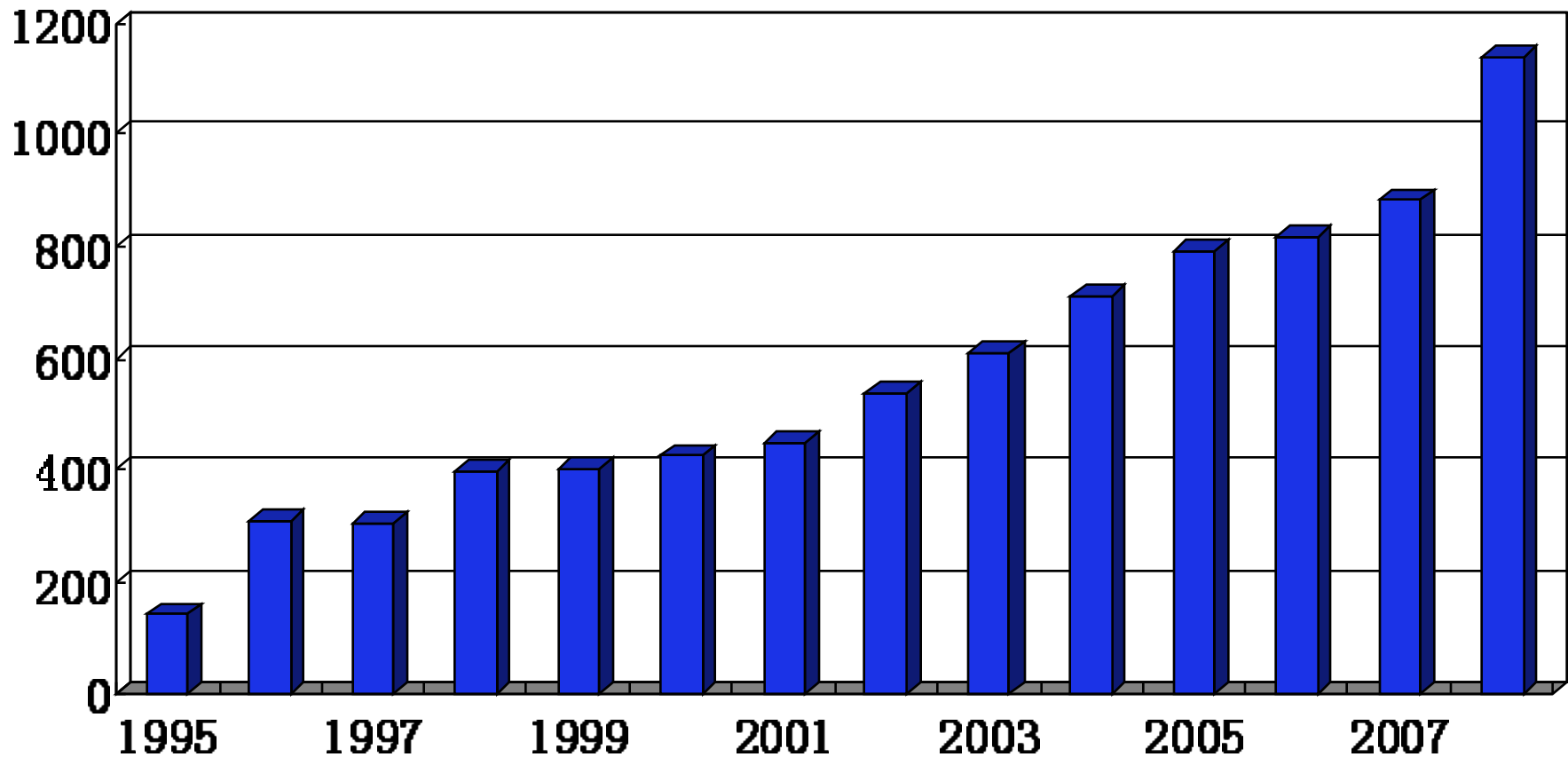
In 2008 : 36.1 billion m³, an increase of 3.1% than in 1995





❖ Rapid growth of wastewater treatment plants

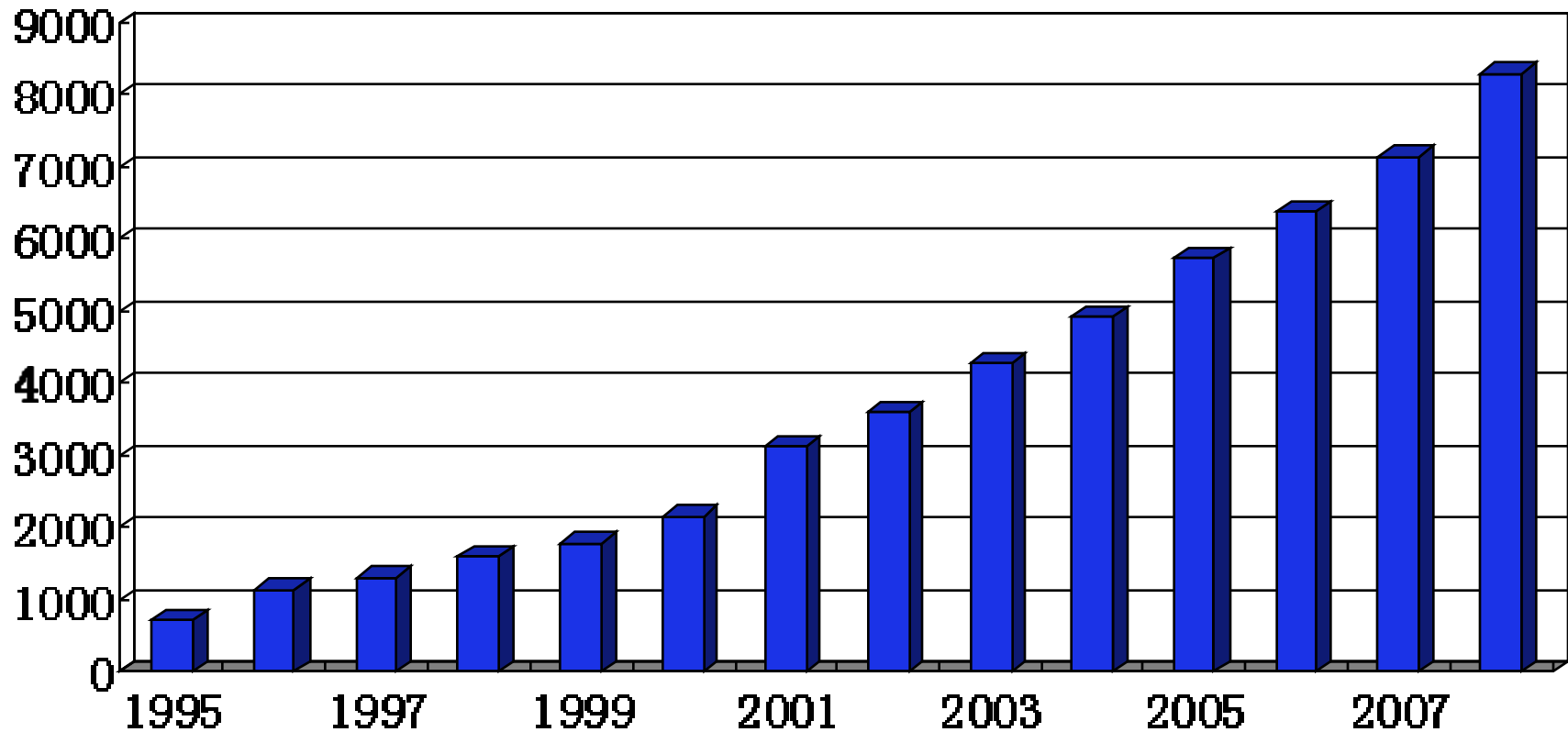
Total of 1138 WWTPs have been built within 655 Chinese cities by the end of 2008, 8.1 times as many as in 1995.





❖ Total wastewater treatment capacity has grown fast

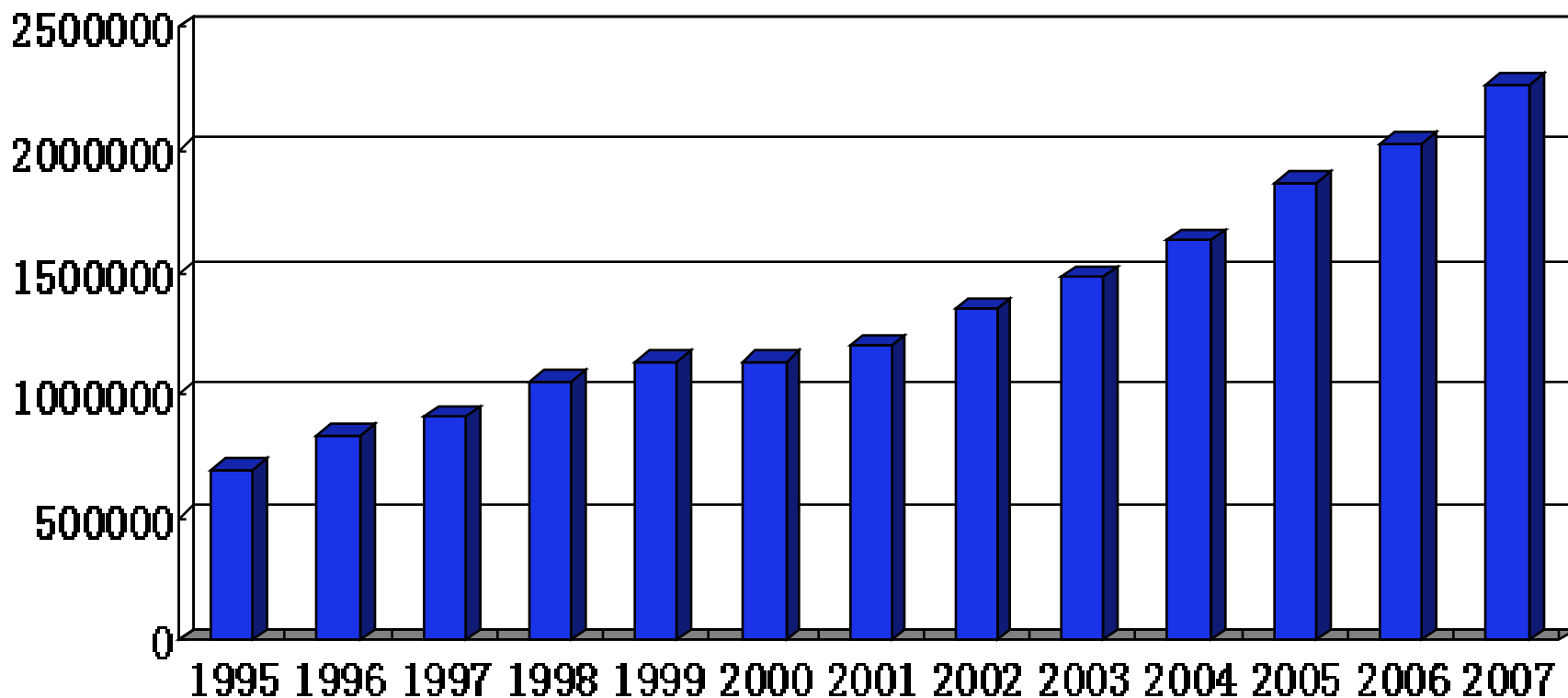
in 2008 : 82.95 million m³/day, 11 times as much as in 1995.





❖ Continuous increase of Total volume of wastewater treated (1995-2008)

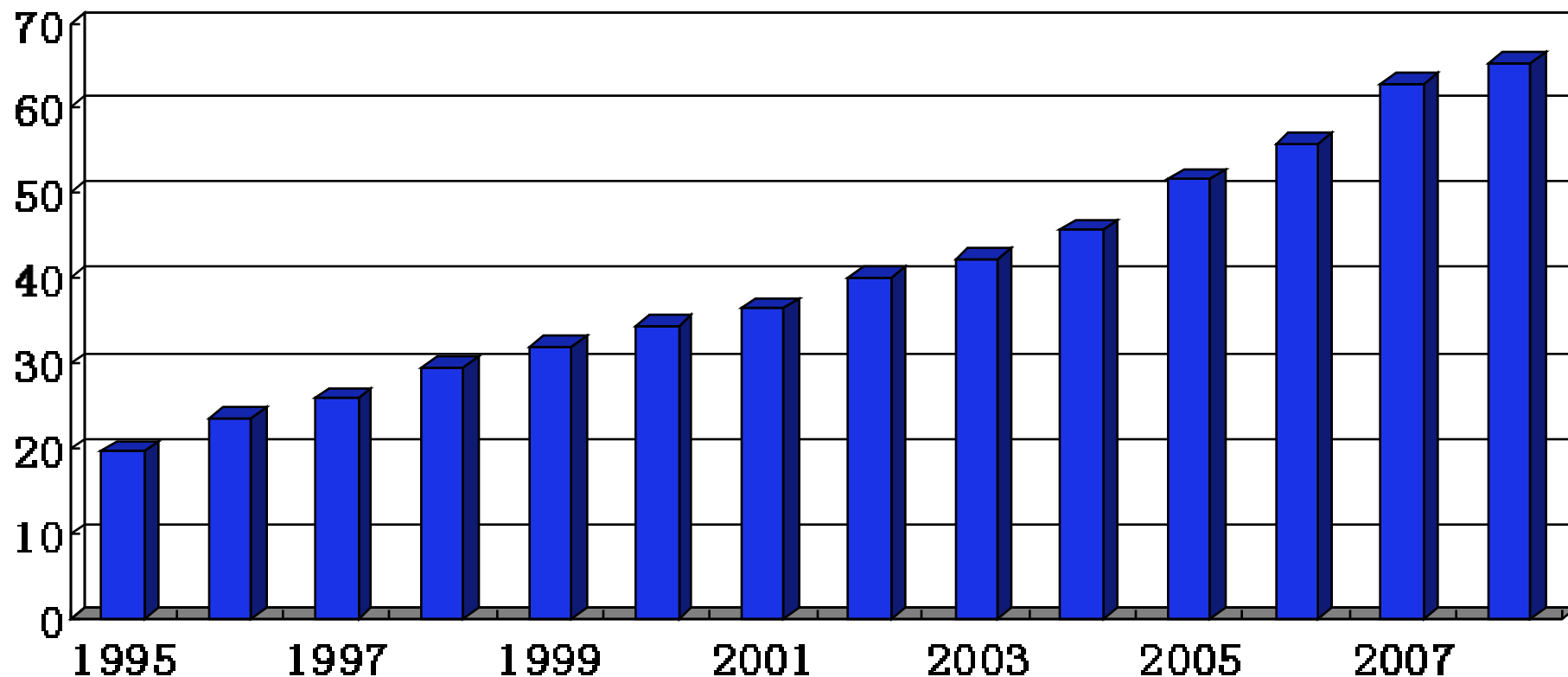
Total of 23.5 billion m³ wastewater was treated in 2008, about 3.4 times as much as in 1995.





❖ Wastewater treatment rate has increased constantly

Wastewater treatment rate saw an increase of 46% to reach 65.3% in 2008 , compared to 20% in 1995





Upgrading of urban wastewater system: driven by fast urban development and inadequate capacity of the existing system

- 167 cities in China have not been served by domestic wastewater treatment
- Wastewater collection networks cannot satisfy the needs.
 - Existing urban sewage systems can only cover half of the needs for wastewater collection and transfer
 - Some existing wastewater treatment plants have not reached their design capacity
- Demand for upgrading urban wastewater treatment
 - Target of water environment protection in major water basins and areas
 - High effluent discharge standard for reclamation and reuse



Demands for development of urban wastewater sector

❖ Target (by 2010)

- All cities to be served by domestic wastewater treatment facilities
- Domestic wastewater treatment percentage to be no less than 70%

❖ Tasks

- Construction and upgrading of wastewater treatment facilities
- Renewal and rehabilitation of wastewater collection and transfer networks
- Sludge disposal and stabilization
- Water reclamation and reuse

❖ Demand for investment

- Total investment of 330 billion RMB according to the 11th FYP
- 17 billion RMB (7.4%) has been put into the priority investment for “promoting domestic expenditure”



Management and Reform of urban water sector

- Defining reform objectives
- Opening market
- Deepening state-owned enterprise reform
- Establishing rational pricing system
- Perfecting Concession management
- Establishing government regulation system



Wastewater Treatment Facing Great Challenge

---efficiency improvement through institutional reform and mechanism innovation



- ◆ Objective changes of governmental performance evaluation — e.g. from wastewater treatment rate oriented to total pollutant reduction oriented
- ◆ Change of the payment way of public financial — e.g. from construction grants to output-based grants
- ◆ Strengthening wastewater charge system
- ◆ Specialization and socialization of operation of waste-water treatment facilities
- ◆ Improvement of industry policies and support strategies



Thank you for your attention!