Reducing Water Consumption and Water Pollution Impacts

Considering environmental factor, we are reducing the overdraft (overuse) of underground water by increasing the efficiency of industrial water usage and through integrating manufacturing facilities. We are also working to lower the impact of our activities on water quality.

Reduction of Service Water Consumption

The Hitachi Chemical Group has been taking various approaches to reducing water consumption, including integration of facilities and increased use of recycled water from cooling systems. In addition, we have been moving water pipes from underground to aboveground as a prevention against water leaks. In order to prevent land subsidence, we have been taking various measures to avoid the overdraft of groundwater, including construction of a water supply system from Kasumigaura Canal and a reduction in overall service water consumption.

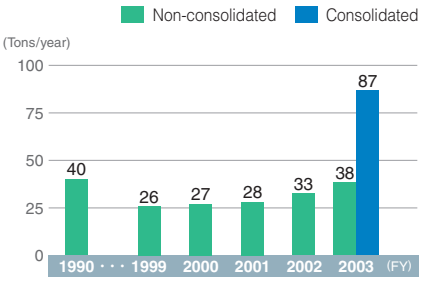
Prevention of Water Contamination by Wastewater

As a preventive measure against water pollution, the Hitachi Chemical Group biologically treats the wastewater generated from its production processes and stores in a tank before releasing it into the public sewage system, following pollution control agreements with local governments.

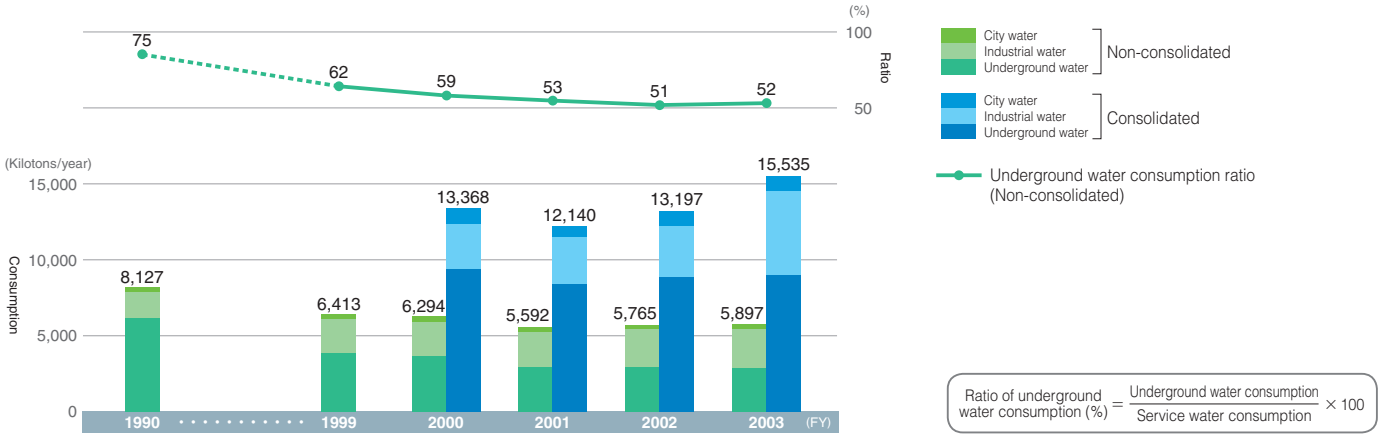
The treated water in the storage tank is continuously inspected for BOD* and other index items, ensuring that the concentrations of indexed substances meet full legal standards.

* BOD: Biochemical oxygen demand.

Amount of BOD emitted



Service water consumption and underground water consumption ratio



$$\text{Ratio of underground water consumption (\%)} = \frac{\text{Underground water consumption}}{\text{Service water consumption}} \times 100$$

Approaches at Manufacturing Works

Installation of Industrial Wastewater Treatment System (Goshomiya Works, 1996)

The Goshomiya Works switched the source of its industrial water from groundwater to service water from the Kasumigaura Canal as a preventive measure against land subsidence. The water is treated at the industrial water purification facility in a receiving tank (1,500 m³), a sand filtration system (1,500 m³/day), and a treated water storage tank (200 m³). The consumption of industrial water at the Works has been substantially reduced (to 45% of 1995 levels) owing to factory-wide water-saving measures. Aiming at environmental conservation and appropriate preparation for the expanding businesses, the Works is planning to extend the water supply system from the Kasumigaura Canal into a site adjoining to the Works on the North.

Industrial Wastewater Treatment System

Next Step

As measures to prevent land subsidence and conserve the natural environment, we will further decrease the use of groundwater and improve the rate of recycled water use. We will install more wastewater treatment systems in order to reduce the level of BOD and other pollution indices in the wastewater to be fed into public sewage systems.