

# Responding to damage to sewage systems caused by the Great East Japan Earthquake

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## 1. Damage to sewage facilities by the Great East Japan Earthquake

At treatment plants along the coastline of Tohoku and Kanto, in addition to devastating damage by tsunami, 120 sewage treatment plants and 119 pumping stations were damaged, with their functions either obstructed or shut down. And damage to pipeline facilities caused mainly by liquefaction included damage to 642 kilometers of pipelines in 132 cities, towns, and villages, resulting in obstruction of the provision of continuous sewage services as, for example, use was restricted for about one month.

## 2. Response to damaged sewage facilities

The Great East Japan Earthquake caused damage exceeding the anticipated range of damage under the rules stipulating mutual support between regional governments during a disaster, so the Ministry of Land, Infrastructure, Transport and Tourism undertook the task of coordinating their efforts.

The Sewage Facility Damage Restoration Headquarters was set up in the Tohoku Regional Development Bureau in order to guide response measures, and handle liaison and coordination with concerned organizations, with countermeasures to prevent the discharge of untreated sewage and to prevent it from inundating cities as the top priority challenge. The NILIM dispatched personnel to the region as TEC-FORCE on the day following the disaster to start up the Restoration Headquarters, then for about one month, sent a total of 14 people to give technological guidance.

## 3. Sewage System Earthquake/Tsunami Countermeasure Technology Study Committee

To perform appropriate emergency restoration of sewage facilities damaged by the Great East Japan Earthquake and final restoration to prevent the recurrence of damage, the Japan Sewage Works Association and the Ministry of Land, Infrastructure, Transport and Tourism established the *Sewage System Earthquake/Tsunami Countermeasure Technology Study Committee*, a group of academic

experts, on April 12, about 1 month after the disaster. In response to technical problems with the emergency response, emergency restoration, and final restoration, technical proposals and appropriate restoration methods were sequentially compiled and released. The NILIM, acting as the committee secretariat, analyzed causes of damage and carried out technical studies of restoration measures. In the disaster region, final restoration is being carried out based on these proposals.

[Reference]

Press Release issued by the Sewerage and Wastewater Management Department of the Ministry of Land, Infrastructure, Transport and Tourism: Sewage Facility Related Damage, Emergency Restoration and State of Initiatives.