

A Study on Post-disaster Timeline Introduction in the Sewerage Field

(Research period: FY2017 to FY2019)

IWASAKI Hirokazu, Head, HIRAIDE Ryosuke, Researcher
Wastewater System Division, Water Quality Control Department,

Keywords: sewerage, pipeline, an earthquake, timeline

1. Introduction

When sewerage facility suffers damage from an earthquake, traffic disturbance and hygiene issues may occur, such as sewage runoff, floating of manhole covers, and subsidence of road (See Photo). In the event of serious disaster, it may be required to regulate road traffic or develop sanitary facilities such as temporary toilet due to temporary restriction on use of sewerage. Hence, in order to recover the sewerage facilities, cooperation of many persons and entities concerned is essential, such as road, water works, health, and river management departments, shelters, and local residents.

In this regard, "timeline," which has listed and organized relevant organizations with information of "when and what they are supposed to do," is an excellent method in cross-sectional co-ordination of organizations, i.e. it is effective in strengthening cooperation system through clarification of responsibility sharing in coordination with related organizations. Accordingly, timeline is effective as a method of conducting organizational co-ordination under BCP smoothly. For the reasons stated above, we study on introduction of the viewpoint of timeline into the sewerage field

2. Outline of the study

Local governments manage their sewerage facilities and, as countermeasures for earthquakes, are formulating Sewerage BCP and making preparation based on the plan in reference to Sewerage BCP Manual etc. For this reason, aiming to promote introduction of the viewpoint of timeline into local governments, this study organizes "concepts" concerning introduction and is going to examine following three items.

- (i) Preparation of a basic and simple post-disaster timeline based on collection / organization of existing literature.
- (ii) Preparation of a post-disaster timeline in a model city and organization of issues in preparation.
- (iii) Preparation of the concept of introducing the viewpoint of timeline in local governments based on the results of (i) and (ii) above.



Photo: Example of sewerage facility at the time of disaster

3. Content of study

First, collecting and organizing 67 pieces of existing literature, we prepared a basic and simple post-disaster timeline. Preparation is based on the "2017 Sewerage BCP Formulation Manual (Earthquake / Tsunami Part)." In addition, we used the "Rules for Supporting Sewerage in Disaster," which provides rules for supporting by relevant organization in the event of disaster, from the viewpoint of cross-sectional organizational co-ordination.

Next, based on results of the above, we prepared a post-disaster timeline with cooperation of two local governments. In preparation, we worked based on information obtained from hearings as well as materials including the disaster prevention plan and sewerage BCP owned by the local government, and consequently organized the issues including necessity to clarify "Time required of individual operations" and "Prioritization of operations."

As a result, we prepared a post-disaster timeline for the model local government and identified issues in preparation. We are going to organize the easy-to-understand concept of introducing the viewpoint of timeline for various local governments.