

1. Technology 1.3 Biological Treatment of Wastewater
2. Project Name 1.3.30 Development of an efficient sewage treatment system
3. Keyword Membrane process, Sewage system, Sewage treatment
4. Objectives The purpose of this project was to further improve the results of previous studies (e.g., discussion on high permeation flux and membrane cleaning methods suitable for large-pore membranes) with the aim of bringing the large-pore membrane treatment system as a countermeasure against water intrusion during rainy weather to the B-DASH (feasibility study) of the Ministry of Land, Infrastructure, Transport and Tourism.
5. Contents/Results From the perspective of promoting water quality management during rainy weather, there is a long-awaited need to improve the level of treatment in order to achieve long-term improvement goals for combined sewers and to develop technologies for efficient treatment of rainwater infiltration into separate sewers. From FY 2017 to FY 2018, a joint research team consisting of the Water Reuse Promotion Center, Kyoto University, the University of Kitakyushu, Nihon Suiko Sekkei, and Fuso proposed and studied a treatment system, mainly using large-pore membranes under the theme of "Development of an efficient rainy weather sewage treatment system using existing facilities" for sewage application research on "Low-cost and efficient rainy weather sewage treatment technology using ICT and observation technology, etc." In order to apply the results to the B-DASH (FS study) project, it was necessary to improve the membrane elements and study the maintainability of the membranes. Therefore, in FY 2019, we studied these issues as a voluntary project and applied for the B-DASH (Feasibility Study) project in FY 2020.
6. Reference This project was a voluntary project and conducted by Water Reuse Promotion Center as the representative researcher, in collaboration with Kyoto University, the University of Kitakyushu, Fuso Corporation, Nihon Suiko Sekkei Co., and Awa Paper & Technological Company, Inc.