



Combined Use Project of Reclaimed Wastewater in Sakai

PROJECT ENTITY: Sakai City Waterworks and Sewerage Bureau
LOCATION: Sakai, Osaka

Background and progress

Sakai has pursued policies to preserve its historic heritage and contribute to the development of a low-carbon, environmentally-friendly city. As part of these initiatives, in 2009 the Sakai City Waterworks and Sewerage Bureau began a program to use reclaimed wastewater to supply toilets, irrigation systems, and industrial users.

The AEON MALL Co., Ltd. (below, AEON) expressed interest in using untapped sources of local energy at a new location on a former fac-

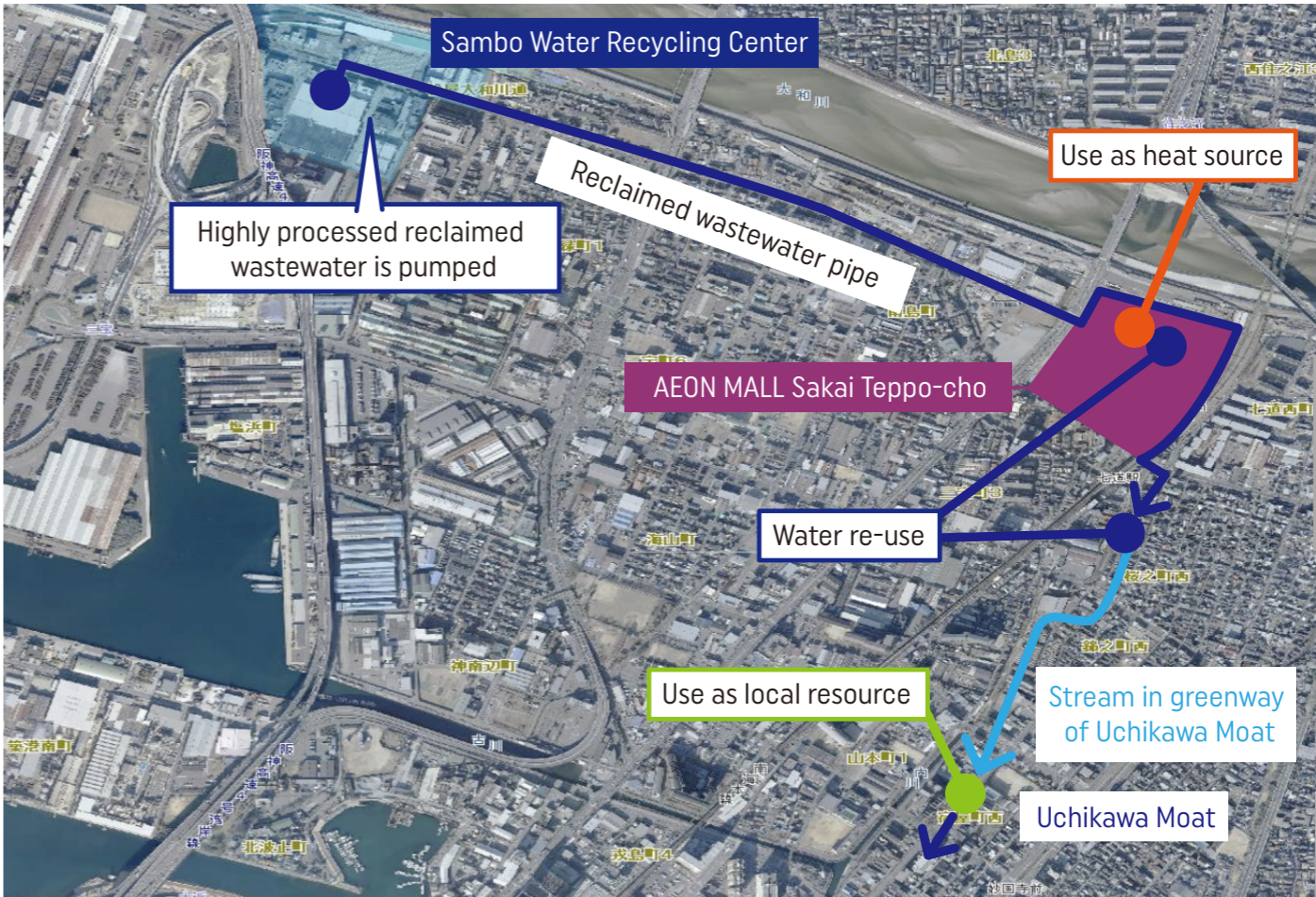
tory site west of Shichido Station on the Nankai Main Line, spurring exploration of new ways to make use of reclaimed wastewater. These studies showed that reclaimed wastewater could be supplied to AEON as a cost-effective source of heat and water, and also released into the historic Uchikawa Moat nearby, leading stakeholders to work together in a public-private partnership.

About the project

AEON uses reclaimed wastewater from the Sambo Water Recycling Center as a heat source for its heating, air-conditioning and hot water systems, as well as a water source for cleaning toilets. Additionally, after use as a heat source, the reclaimed wastewater is discharged into the nearby Uchikawa Moat, ensuring the stable flow and quality of the water and preserving the city's historic heritage. AEON and the Sakai City Construction Bureau, which manages the Uchikawa Moat, pay fees for the use of the reclaimed wastewater.

AEON achieved a 4.3% reduction in energy usage and an 8-tonne reduction of CO2 emissions compared to standard equipment (FY2017 data). In addition, AEON highlights its environmentally-conscious use of reclaimed wastewater on stickers and information boards around its facility, contributing to its corporate social responsibility and branding.

A sustainable solution to local preservation was achieved along with a significant CO2 reduction by tapping an unused local energy source and creating a win-win public-private structure.



Reclaimed wastewater is reused as a source of heat, water, and local resource



A public-private project coinciding with the opening of a commercial facility



System harvests heat from reclaimed wastewater



The small stream that flows into Sakai's historic Uchikawa Moat



Water supply system at Sambo Water Recycling Center