

Sewage Works in Japan 2012

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The annual booklet, “Sewage Works in Japan”, has been issued since 1980. The purpose is to disseminate the information on Japanese sewage management to the world. JSWA issues the booklet electronically on the website this year and after. This is a natural way to go in this day and age of the Internet and paperless. Much more people will be able to access to the booklet.

Individual articles are the power point slides that our members and affiliates used in the previous fiscal year, April 2011 to March 2012, to describe Japanese sewage works. Today, in whatever types of conference, almost all the presentations are made using power point slides. Speakers make the most effort to perfect their slides. However, every so often, the slides are forgotten after conference. This is the waste of knowledge and information. Therefore, JSWA recycles those valuable information media for our purpose. This is made possible by the courtesy of the authors and conference organizers. In addition, national basic data is shown on one file made by JSWA staff. This gives you overall picture of Japanese sewage works.

The site <http://gcus.jp/en/library/> includes 15 presentations from three conferences. The first conference is ADBI-JSWA-JSC Regional Workshop on Sanitation held in Tokyo on October 4-5, 2011. The second conference is WEFTEC 2011 in Los Angels on October 15- 19. JSWA and WEF have had a long term partnership. JSWA organizes a committee to peer review the abstracts from our members before submission. We also organize rehearsal session for chosen oral presenters before the WEFTEC <http://www.weftec.org/>. I sincerely appreciate for the kindness of WEF for the approval of our use of their presentations. The last conference is the 6th World Water Forum in Marseille March 12-17, 2012.

In the ADBI-JSWA-JSC Regional Workshop, Dr H. Katayama made a presentation titled [“Strategy for extending sanitation services by an integrated coverage with on-site and off-site systems in Japan”](#). His presentation was comprehensive. He described how Japan has come to the today’s situation on sanitation with historical reflection. He mentioned changing roles of centralized sewerage system and advantages and disadvantages of on-site treatment system. Mr. K. Yamaji talked about Kobe City’s master plan on wastewater management with

the title [“Kobe Aqua Plan 2015”](#). He looked back on the great earthquake in 1995 with its damage to sewerage and recovery works. He explained the newly-completed interceptor sewers networking among four treatment plants as emergency measures against next earthquakes. He also mentioned the use of biogas from sludge digestion for vehicles and city gas. Mr. K. Ue presented one of the biggest problems in disaster by [“The Great East Japan Earthquake: Sanitation and Toilet Issues”](#). His presentation was with lots of pictures showing how awful the toilet issue was. He made the proposals to improve sanitation in disaster at his conclusion.

In the WEFTEC 2011, Mr. H Kato made a presentation by [“Report on Eastern Japan Great Earthquake and Sewerage”](#). He described the damage to sewerage mainly by tsunami and how the national government responded to the unprecedented catastrophe in cooperation with the utilities nationwide. Mr. K. Kitamura presented [“New Approaches to the coexistence of water quality improvement and GHG reduction in wastewater treatment”](#). Tokyo tries hard to reduce GHG from treatment process while meeting nutrient permits in effluent. To this end, he introduced the innovative approach of aeration control with the use of NH₄ and EC meter. Mr. H. Yamada also told GHG issues in wastewater management of Tokyo. His title was [“Earth Plan 2010”](#). It is their master plan for GHG reduction. He explained comprehensively how Tokyo is working on GHG with the focus on sludge treatment. Mr. A. Morishima presented [“Drastic Mitigation in Greenhouse Gas Emission by Sewage Sludge Gasification System in Kiyose Water Reclamation Center”](#), also in Tokyo. He explained how the system works and how much reduction is possible compared with conventional incineration. Mr. K. Nakanishi with Osaka City told [“A New Approach to CSO Control”](#). Osaka sewer is combined system and has lots of inverted siphons. Deposits with FOGs in the inverted siphons are flushed out as CSO to the creeks and canals during wet weather. He developed a system to be installed at manholes to prevent deposits accumulation by extensive research of experiment and field test. Mr. S. Nakamura with Nagoya City made a presentation [“Development of Smart and Compact Advanced Treatment Process for Nutrient Removal, Carrier-Added A2O Process”](#). He told how Nagoya successfully achieved nutrient removal to meet the target under hydraulic limitation in full scale by using moving-bed biofilm reactor (MBBR). The media type was sponge. Mr. M. Ito showed [“Study on equipment diagnostic technology utilizing Tribology”](#). Background of its use is that the machines in wastewater facilities need to be moved away to workshop and got taken apart in order to inspect the wear-down of bearing in Japan. Tribology technique can reduce the cost with no moving and taking apart. Mr. M. Minami introduced [“Phosphorus Recovery Technology in Japan”](#). He explained current

situation, potential of untapped incineration ash of sewage sludge, and a leading project comprehensively.

In the 6th World Water Forum, Mr. H. Tanaka with a small utility of Tadotsu spoke "[Best Practice of Wastewater Reuse in Japan](#)". His utility reuses wastewater up to 60% of its generation. The reuse is for irrigation, groundwater recharge, and recreation. The national average is only 1.4%. He emphasized Mayor's strong leadership and good communication with citizens for the success of the project.

If you have questions and comments on the presentations, please contact below. My staff responds quickly consulting with the authors. I hope this electronic booklet will help you get more information about Japanese sewage works.

Presentations;

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