

Construction of water-supply pipes and sewers

A. Construction of rainwater sewer system

The length of rainwater sewer construction in the urban development project by the end of 2008 was 6,858.5 kilometers and 4,337.6 kilometers have been completed; 3,433.7 kilometers in Taiwan Province, 521.6 kilometers in Taipei City and 382.3 kilometers in Kaoshiung City. The implementation rate of rainwater sewer construction is 63.2%; 96.8% in Kaoshiung City, 96.6% in Taipei City. Among Taiwan Province, implementation rate in Penghu is 91.1%, and the percentage is lower than eighty in the rest of the counties.

B. Sewage sewer construction

Sewage sewers are sewers for family and industrial sewage. The whole sewage treatment rate includes public sewage sewer available rate, special sewage sewer available rate and the implementation rate of building sewage systems. Sewage sewer construction is regarded as an important index for the urban modernization. In IMD reported by Lemania College, public sewage sewer available rate was listed in life quality as one of the evaluation items. The government also treats it as the performance index of sewage sewer construction.

1. Sewage treatment rate

By the end of 2008, the number of sewage treatment units of the country was 2,506,799 and the sewage treatment rate was 43.5% which increases 3.8% in comparison with 39.7% in 2007. The unit number of public sewage sewer was 1,123,169 (19.5% available rate) which increases 2.0% in comparison with 17.5% in 2007; 768,861 units (13.4% available rate) of special sewage sewer (in the scale of 100 units / 500 people or more in the communities and industrial districts) which increases 0.8% in comparison with 12.6% in 2007; and units with the implementation of building sewage systems are 614,769 (10.7% implementation rate) which increases 1.1% in comparison with 9.6% in 2007. In terms of the sewage treatment rate, Taipei City is the highest (97.8%), followed by Kaoshiung City (83.0%), Taipei County (72.5%), Lienchiang County (68.7%), other counties and cities are not over 50%. As to the usage fee, some counties and cities have not finished the self-governance articles in charges of sewage usage. In considering the low piping coverage of sewage, only Taipei City charges to the users. Taiyuan

County, Taichung County, Keelung City and Kaoshiung City charge to the users in Industry Park, only. Other counties and cities do not charge for it. The usage fee in 2008 was 982,497,000 dollars which increases 16.8% compared with that in 2007 and the CMY was 1,121,330,000 tons, which increased 24.4% compared with that in 2007. In which, the CMY in Taipei City (451,990,000 tones) is the highest, followed by Kaoshiung City (302,710,000 tones) and Taipei County (251,080,000 tones).

2. Expense of sewage sewer construction

The sewage sewer is urban public construction. The construction period is long and the investment is large. Therefore, the government must invest more than 10 billions in it every year. The construction expense comes from the government and the folk. As for the part of the government, the expense will be processed from the public budget planned by central government and local government. In which, Taipei City has the sufficient financial resources. However, other local governments cannot raise the money easily. As a result, the construction expense almost depends on the subsidy from the central government and the construction progress is slow consequently.

The total expense of sewage sewer construction was 14,766,004,000 dollars in 2008; the construction fee was 12,557,236,000 dollars (85%), followed by 1,633,831,000 dollars (11.1%) of land fee and 310,513,000 dollars (2.1%) of planning fee. The expense of Taipei City was 2,540,372,000 dollars, 2,348,601,000 dollars for Taoyuan County, 1,397,812,000 dollars for Hsinchu City. In addition, construction fee more than one billion includes 1,356,657,000 dollars for Taichung County, and 1,355,831,000 dollars for Taipei County.

3. Sewage sewer system management fee

The sewage sewer system management fee in 2008 was 2,012,092,000 dollars which increases 13.0% in comparison with 1,781,230,000 dollars in 2007, 645,424,000 dollars (32.1%) for electricity, 522,834,000 dollars (26.0%) for personnel fee and 153,250,000 dollars (7.6%) for maintenance fee.

4. Sewage sewer pipes and facilities

The planned length of sewage sewer pipe diameter 600mm or above was 1,206,873 meters till the end of 2008 and 655,298 meters had been constructed.

The planned length of pipe diameter 300mm – 600mm was 2,944,471 meters and 1,383,028 meters had been constructed. The planned length of sewage sewer pipe diameter 300mm or below was 3,690,354 meters and 2,656,804 meters had been constructed. The length of the piping planned was decreased in 2008, compared by 2007, due to the recalculation for the system conversion in Rende Township, Tainan Count. It caused the length being reduced for the pipe diameter 600mm (and over), 300mm-600mm and 300mm (below). As for the constructed length of sewage sewer pipes in Guantian Township, Tainan County, the number was estimated in 2007 and the number was the actual one in 2008. Therefore, the data for the sewage pipe diameter 300mm (and over), 300mm-600mm and 300mm (below) were not consistent for 2007 and 2008. In terms of sewage treatment facilities, the planned water treatment plants was 202 till the end of 2008 and 48 had been constructed. The planned pumping stations were 229 and 121 had been constructed. The planned interceptor station were 108 and 73 stations had been constructed.