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OF LAW
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BIG VALUE.

THE BUSINESS OF WATER IN MEXICO

ABDON HERNANDEZ*

According to a 1999 study by the National Water Commission (*Comisión Nacional del Agua*) in Mexico there are 201,138 population centers of which 98.6% are rural with less than 2,500 people and only 1.4% are urban with more than 2,500 residents.

Notwithstanding the substantially higher number of rural communities, 73.5% of the nation's population resides in urban villages, towns and cities, of which 48.2 million persons, which represent 51% of Mexico's total population, lives in 169 cities of more than 50,000 inhabitants.

In rural communities of between 10 and 499 inhabitants, public hydrants have been or are being installed to provide potable water and in rural communities of 500 to 2,500 inhabitants, individual water connections have been or are being installed. Due to their geographical dispersion, only 64.4% have a water supply and 32.01% have sewer systems; the target for year 2000 was to provide water to 66% of their residents and sewer systems to 53% of the population in such rural communities.

In medium size cities of up to 50,000 residents, 89.7% have potable water supply for 19.2 million residents out of a total of 21.4 million; and only 16 million people have sewer systems, that is a coverage of only 74.7%.

In large cities with more than 50,000 inhabitants, water supply is available to 96.4% of their residents, that is only 47.3% out of a total 49 million persons and 45.3 million or 92.4% of their population have sewer systems.

Towards the end of 2000, the municipal wastewater treatment infrastructure was 1,011 treatment plants with a design capacity of 73.2 cubic meters per second; however, only 787 plants treat 43.8 cubic meters per second, which is only 22.3% of the 196.4 cubic meters per second of wastewater generated.

As mentioned in our presentation this morning, Mexico's Federal Constitution provides that the municipalities, with the concurrence of the States, when necessary and as provided by the laws, will be responsible for the public water and sewer services. However, one of the major problems encountered by the municipalities is the shortage of financial resources to install or expand water distribution and sewage collection networks.

As a result of the above, the participation of private enterprise in the financing, construction and operation of water distribution and sewer systems, as well as water treatment facilities, is an attractive alternative which can contribute to the above mentioned targets and to increase the coverage in terms of number of communities and population served.

However, from the legal perspective, among the problems encountered by investors interested in participating in such business opportunities the most

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significant is the multiplicity of state legislation, because each State has its own legislation regarding water, although not all states have a "State Water Law." States such as Veracruz and Guerrero, where major tourist centers such as Acapulco and Ixtapa-Zihuatanejo and important water users are located, are still studying the advisability of enacting a more modern and institutional state water law. In some states, water legislation expressly allows or forbids the participation of private enterprise; in other states, the law is silent and therefore subject to the whims of the government and political party in power. The so-called "privatisation" of water distribution and sewer systems is deemed by some sectors as undermining Mexico's sovereignty, even though it is really an "outsourcing" of certain services. In addition, many states, such as Quintana Roo (where the Cancun and Riviera Maya tourist centers are located), Sonora, the State of Mexico and the Federal District, to name four, have a "State Water Commission," as the operator of water distribution and sewer systems and/or as a regulatory body (for example, CAPA [*Comisión de Agua Potable y Alcantarillado*] in Quintana Roo and CADF [*Comisión de Aguas del Distrito Federal*]). In some states there are also Municipal Water and Sewer agencies, some acting as regulatory or granting authority or as the operator of the water and sewer system (for example, SIMAS [*Sistema Municipal de Aguas y Saneamiento*] in the city of Torreón, Coahuila, and SAPAL [*Sistema de Agua Potable y Alcantarillado de Leon*] in the city of Leon, Guanajuato).

On the other hand, there are federal and local fiscal "lost funds" and development banks' loans at preferential rates available for the construction and operation of water distribution, sewer and/or treatment systems, to complement revenues from water consumption and sewer fees collected by the operating governmental agencies, concession holders or contractors.

Another major problem faced by the water systems' operators, regardless of whether they are governmental, semi-governmental or private enterprise (alone or in joint ventures with governments or their agencies, with our or without foreign investment), is the water consumption and sewer fees collected in a specific location. There are two aspects of this problem. The first is that of 100% of the water produced, only 60% is consumed and 40% is lost (e.g., to leakage or evaporation); only 52% is billed and only 33% is paid. It must be pointed out that, by law, water to domestic consumers cannot be cut off due to lack of payment. The other problem is that water consumption fees are specified in state and/or municipal revenues' laws enacted by the state legislatures, and not too infrequently fees are kept low for populist reasons and/or to prevent social unrest. Therefore, in many instances and locations the water consumption fees are insufficient to cover (i) the payment of the "in block" fees to the National Water Commission, (ii) operating and maintenance costs of the facilities, (iii) repayment and service of debt from development bank loans, (iv) recovery of the capital invested and a suitable return on investment (in the case of private and "mixed" enterprises), and/or (v) much less to improve or expand the necessary infrastructure to meet the growing needs of an increasing population.

Considering the foregoing, four basic premises should be considered: (i) the need for active involvement by water consumers in the preservation and reduction of waste of water resources, reduction of water pollution and even participation in the regulatory agencies, (ii) the restructuring of the regulatory and control function, with clearly defined roles, duties and responsibilities of the participants, focused on the

development of the water related sector with emphasis on the beneficiaries thereof, (iii) the establishment of realistic water consumption fees, and (iv) the participation by private enterprise in (A) the construction of much needed additional infrastructure such as dams and reservoirs to retain water for agriculture, power generation, industry and population centers, and (B) the construction, management and operation of the water distribution and sewer systems, not as an end in itself, but as a means to provide a real response to meet the needs of the population at large and promote regional and local development.

The participation of private enterprise in water distribution and sewer systems can be done in various forms and schemes: (i) full concessions, (ii) BOOT contracts (Build, Own, Operate and Transfer), (iii) BOT contracts (Build, Operate and Transfer), (iv) general services contracts, (v) leasing, (vi) DBO contracts (Design, Build and Operate), (vii) O&M contracts (Operate and Manage) and (viii) technical assistance agreements.

It should be clearly pointed out that, in Mexico, companies engaged in water business activities through any of the above mentioned arrangements do not "profit" from the sale of water, because they do not and cannot "sell" water. As mentioned this morning, most water in Mexico is a national resource. Even though in our previous presentation we stated that water was the "precious commodity" of the 21st century, it was with the connotation of something useful, and not as an article of commerce that can be bought and sold. Under the contractual structures mentioned, companies perform one or more of the following services: (i) drill and operate wells on behalf of the municipality or regulatory agency, (ii) install and/or repair water distribution pipes and/or sewage collection networks, (iii) install and repair water consumption metering devices, (iv) distribute water and/or collect wastewater, (v) do meter reading, (vi) issue water consumption bills and (vii) treat waste water.

In most instances water consumption bills are paid by the consumer directly to the local tax authority or the water regulatory agency. In the few cases, such as concessions, the concession holder collects the water consumption bills, but turns over the proceeds to the appropriate governmental agency, after deducting the fees provided in the concession in payment for the services rendered. These fees allow the concessionaire to repay and service debt, make the necessary capital expenditures for installation, maintenance and expansion of the networks and related equipment and/or water treatment facilities, and to recover its investment plus a reasonable return on investment, which is essentially determined by the granting authority. In the cases where there is only a wastewater treatment operation, as a general rule the contractor delivers the treated water to the municipality or regulatory agency and they decide when and how to dispose of it. In the very few cases where the contractor is allowed to "sell" the treated water to industry or certain agricultural irrigation purposes, the applicable "price" is determined by the municipality or regulatory agency. In any event, if the water were not treated it would otherwise be truly wasted and "lost" and might even pollute the recipient bodies or aquifers.

