

secondary treatment, as existing municipal plants cannot cope with demand.

Several industries are particularly heavy discharge offenders. The sugar industry discharges 38.8% of all industrial effluent; the chemical industry 21%; the pulp & paper industry 6%; the petroleum industry 8.2%; the beverage industry 2.4%; the textile industry 2.7%; and the steel industry 1.7%.

LEGISLATIVE BODIES

Concern for water pollution in Mexico has led to renewed efforts to establish effective regulatory bodies. Before 1992, water discharge standards did exist; however, they were rarely enforced. To combat this problem, Mexico has restructured responsibility for industrial water pollution. Three levels of government now play a role in wastewater management: federal (SEDESOL, the Secretariat of Social Development, and SARH, the Secretariat of Agriculture and Water Resources), state, and municipal. Mexican companies can be subject to regulations from any or all three authorities. In general, jurisdiction is determined by which government authority retains control over the body of water to which effluent is discharged.

In theory, each government organization has specific enforcement responsibilities. In practice, an offending company can be inspected by any or all government authorities. This situation is expected to continue until management systems are put in place and backlogs eliminated.

SEDESOL

SEDESOL (Secretariat of Social Development) was formed in 1992 by the consolidation of the Secretariat of Urban Development and Ecology (SEDUE) and the National Solidarity Program (PNS). There are two departments within SEDESOL that impact industrial wastewater treatment: The National Institute for Ecology (INE) and The Federal Attorney General for the Protection of the Environment (PROFEPA).

In general, INE is responsible for the development of national environmental standards (NOMS) and regulations. All NOMS developed by INE are classified as federal, and represent the minimum allowed standard in Mexico. The organization also administers environmental impact assessments for industrial operations.

SEDESOL:

Federal government ministry responsible for the creation of all environmental standards and norms; also charged with the development of environmental impact assessments and enforcement of environmental regulations; has the authority to close plants not complying with wastewater norms.

SARH:

Federal government ministry that administers agricultural and water resources; while SEDESOL can enforce water pollution standards, it is SARH that has the direct responsibility to do so; taxes for non-compliance with wastewater regulations are paid to SARH.

STATE/MUNICIPAL:

Have jurisdiction over discharges to state or municipal drainage systems; standards must be as strict or stricter than federal authorities; responsible to SARH for their own discharge to national water bodies.

In October of 1993, INE published revised standards for industrial and municipal water effluent. These standards are significantly stricter than previous legislation, and will have a positive impact on the demand for wastewater equipment. 30 standards are classified by industry, and provide parameters with which all companies operating within that sector must comply. Another norm regulates conditions for discharges to municipally operated drainage networks. Finally, two norms control the quality of water that can be used for irrigation purposes (see Appendix 2 for full list of existing norms). Twelve additional standards (see Appendix 3) are expected to be implemented in 1994. The environmental standards developed by INE are on par with those of Canada and the United States. In many cases they have been developed by international consultants or modelled on standards developed by the Environmental Protection Agency in the U.S.

As previously mentioned, all norms published by INE represent the minimum legal standards for water discharge. Stricter regulations may be imposed on a per company basis. INE maintains the right to impose specific discharge conditions (*Condiciones Particulares de Descarga*). These conditions are negotiated with individual companies