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MEXICO WATER REPORT



Water in the News

Serious Flooding throughout Mexico, including Mexico City

During the first week of February, Mexico City has experienced the worst flooding problems in decades. Eleven deaths in the Mexico City area were attributed to the washout of a local road/highway between Mexico City and Toluca. Meanwhile, 32 deaths have been attributed to extreme flooding in Tabasco in the south and the central states of Mexico/Federal District, Michoacan, and Guanajuato. While winter is normally the dry season in Mexico, this year has been an exception, and more rain is in the forecast.

The rupture of two main drainage canals in Mexico City has left several poorer neighborhoods in the eastern part of the city under six to 10 feet of rainwater mixed with raw sewage. Several of Mexico City's principal rainwater drainage systems were already shut down for repairs when fast, heavy rains hit the city. These closures, together with both an aging and severely clogged deep drainage system, created the majority of the problems. Some reservoirs in the Mexico City area are near capacity while others, not affected by the shutdown, are at or below normal levels.

After serious floods in 2007, Mexico City planned a series of large projects, including the construction of Latin America's largest wastewater treatment plant, rehabilitation of the rainwater runoff tunnels so that they can be serviced while still fully operational, and creation of a US\$1.1 billion drainpipe system to prevent future flooding. Construction work on the drainpipe project was scheduled to start in 2008 and be completed in 2012.

Atotonilco Wastewater Plant Construction to Begin

CONAGUA General Director Jose Luis Luege Tamargo and shareholder Carlos Slim began the year by signing a contract for the construction of one of the largest water projects to date, the Atotonilco wastewater treatment plant in Mexico's Hidalgo state. The construction, expected to begin by the end of the first quarter, will represent an estimated investment above 10 billion pesos (US\$783 million). It will have a capacity of 23 cubic meters per second, allowing for the treatment of approximately 60 percent of the wastewater produced in the Valley of Mexico, which currently has one of the lowest coverage levels in the country, at 11.6 percent. The Atotonilco wastewater plant follows the presidential strategy of encouraging private investment, along with federal government funds, to promote projects that benefit the country. The bid was awarded to a consortium consisting of Promotora del Desarrollo de Am  rica Latina, S.A. de C.V., Controladora de Operaciones de

Infraestructura, Atletec, Acciona Agua, Desarrollo y Construcciones Urbanas, LCC, and Green Gas Pioneer Crossing Energy, a subsidiary of U.S. firm Green Gas.

Source: Conagua Press Release: January 7, 2010

CONAGUA will Develop New Water Norms in 2010

CONAGUA General Director Jose Luis Luege Tamargo announced a stronger commitment by the Mexican federal water commission to develop new and better water usage norms or standards that will allow for an improved balance between human and environmental water needs. He specifically discussed a new norm to establish the minimum flow levels for river basins to ensure their preservation and allow for the recuperation of caudal ecosystems. Eight other water norms that will be insitituted sometime during 2010 include:

Water consumption specifications for plumbing/bathroom devices;

Specifications and test methods for potable water system, sewer, and domestic water intake related to hermetic questions;

Maximum allowed pollutant limits for brine water discharge of sea water desalination plants into national waters and related environmental impacts;

Modification of NOM-011-CONAGUA-2000, which establishes the specifications and methods to determine the mid-annual availability of national waters;

Discharge for urban wastewater that is not connected to a sewer system;

Requirements to obtain the seal of *Área Especial Ecología* for laundry washing machines;

Specifications for rainwater discharge in urban zones; and

Flow control devices, water flow regulators, and test methods.

The same article included an inventory of the country's *Áreas Especiales* wetlands, which will aid in determining the current state of these ecosystems, knowing what these assets and services provide, and being able to develop measures to ensure their conservation and sustainable development.

Sources: Conagua Press Release, November 9, 2009; Ooska News, December 9, 2009; additional information obtained from Conagua officials in February 2010

Foreign Investment Options for Water Projects in 2010

During the "Mexico Infrastructure Conference: Portfolio of Infrastructure Projects for 2010," the CONAGUA General Director stressed that the water commission is fully open to the participation of foreign investors in the water sector in Mexico. Some of the key projects include potable water plants, wastewater treatment plants, pipelines and desalination plants. For U.S. investors, the main attraction for these projects lies within the recent modifications to investment companies that will allow the money being captured for workers' *Seguro de Vida* retirement programs to be invested in infrastructure projects. Also, approximately 200 projects could include public-private partnership associations, particularly in the areas of potable water plants and the modernization of farm irrigation systems. One of the main projects for 2010 is the El Zapotillo reservoir in Jalisco

state, which is expected to provide potable water to 14 municipalities and is budgeted at 5.36 billion pesos (US\$419 million), of which 49 percent will be provided by the national infrastructure trust fund, Fonadin, with the remaining 51 percent coming from private investors. Another priority project is the Falcon-Matamoros pipeline in Tamaulipas state, budgeted at 6.55 billion pesos (US\$512 million), which will receive 31 percent of its funding from Fonadin, and the remaining 69 percent from private investment.

Source: Conagua Press Release, November 20, 2009; CNN Expansi3n, December 2009

ICA-CICSA Partnership in TEO and Atotonilco Water Projects

Ingenieros Civiles Asociados (ICA), a Mexican engineering and construction firm which last November bought tunnel and underground works specialist Cotrisa in a deal worth US\$22 million, announced that they have signed a contract with Carso Infraestructura y Construcci3n (CICSA) for the construction and operation of the wastewater treatment plant in Atotonilco, Hidalgo, Mexico's largest plant and one of the 10 largest plants in the world. Another project of importance involving ICA is the T3nel Emisor Oriente (TEO), a pipeline that will lead into the Atotonilco plant with an investment of nearly 13 million pesos (US\$ 1 million). The TEO will be 62 kilometers in length by 7.5 meters in diameter and can be compared to the breadth of the Rio Bravo River. Its objective is to reinforce the sewage system of the Federal District in order to avoid floods in the Valley of Mexico, and it is expected to be completed by 2012. Maldonado Bravo, Director of Hydraulic Engineering at CONAGUA, mentioned that equipment is being imported from Germany and the United States. He stressed that once this project is completed, in addition to reinforcing the existing sewage system, CONAGUA will be able to implement a maintenance program during which no sewage system will have to be shut down.

Source: El Financiero, January 8, 2010