

PLHINO/PLHIGON: Watering Mexico's Desert

Two longstanding water management proposals in Mexico, the Northern Gulf Hydraulic Plan (PLHIGON) and the North West Hydraulic Plan (PLHINO), will complement the great benefit that NAWAPA will bring to the western North American continent. Both involve diverting water from the huge rivers of the Mexican Isthmus, which suffers constantly from flooding, to the north, by building canals, dams, and pumping stations for that purpose.

While neither the PLHINO nor PLHIGON would carry water directly to the desert region in north-central Mexico, projects have been devised, especially with the PLHIGON, that would bring water to the region. The PLHIGON would also control river run-off and prevent flooding, so that the vast coastal flood plains of Tabasco and Campeche in the South could be put into agricultural production.

One project that would be especially important for carrying water into the desert is a proposal dubbed the TzenValle System. The idea is to divert about one-third of the water from the Pánuco River (the fifth-largest in the country, in terms of run-off) and its tributaries, and, by means of a series of dams, tunnels, and canals, located some 250-300 meters above sea level, water would be carried north, and then pumped up as far as the city of Monterrey, which is 540 meters above sea level.

The TzenValle System would carry an additional 6.8 km³ of water per year to this arid zone.

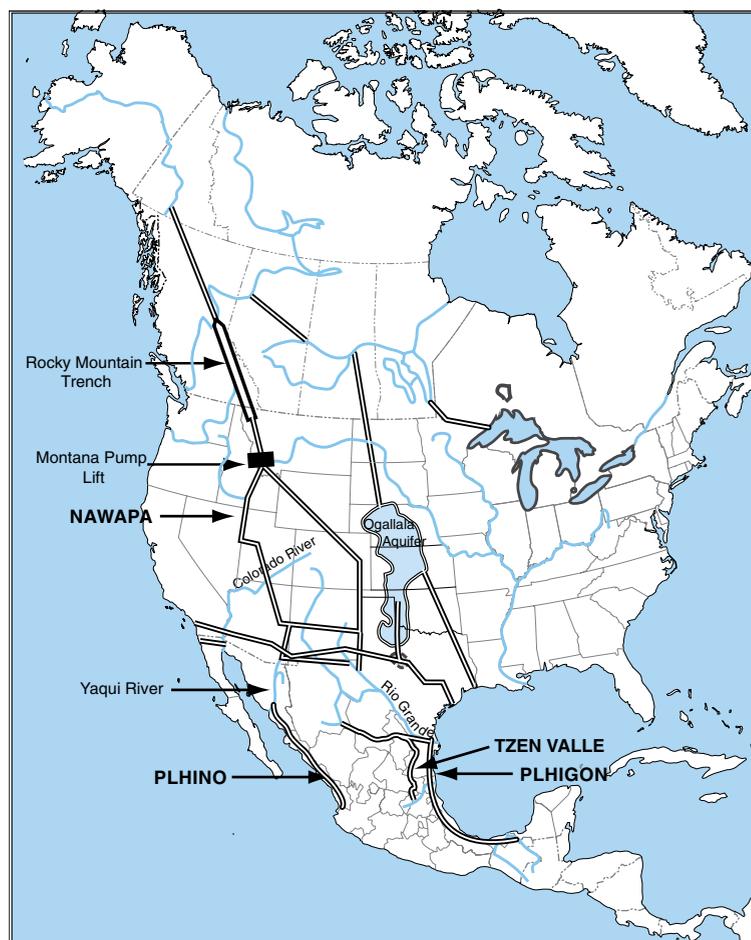
As **Figure 1** indicates, the eastern branch of NAWAPA would connect with the tributaries of the Rio Grande (Río Bravo), which forms the border between the United States and Mexico at that point. This would enable the transfer of large quantities of freshwater—some 6.8 km³—to the arid center-north of Mexico.

The western branch of NAWAPA would feed water across the border to the Yaqui River in Sonora, which would receive nearly 12 km³ of water a year.

The map presents the full direct impact of the NAWAPA-Plus projects on water availability in Mexico. For the country as a whole, there will be 68 km³ of new water available. Since Mexico currently gets 36% of its total water withdrawals from aquifers, and over-exploits more than 20% of them—i.e., withdrawing more water than the amount of annual recharge—it will be necessary to use some 10 km³ of the newly available water to recharge the aquifers and reverse their depletion. That will leave net new water availability of some 58 km³, a 75% increase over today's 77 km³.

This increase in water availability will allow Mexico to irrigate some 5 million hectares of new land, a 75% increase over its current 6.5 million hectares of irrigated land, thus addressing its current devastating crisis in food production.

FIGURE 1
North America: 'NAWAPA-Plus'



Sources: Parsons Company, *North American Water and Power Alliance Conceptual Study*, Dec. 7, 1964; Hal Cooper; Manuel Frias Alcaraz; *EIR*.