

The proposed Pembilier Dam would provide an equitable and comprehensive means for alleviating the chronic flood problem in the basin, which could lead to a more harmonious relationship between residents in the two countries.

The Review Committee is aware of a study underway by a Committee of Canadian and United States officials to solve problems associated with localized flooding of agricultural lands in the Gretna-Neché area along the International Boundary. In a memorandum of understanding dated June 22, 1973, the latter committee noted that while the development of works is required to drain surface water from agricultural lands, the total problem can only be resolved by effectively controlling the Pembina River.

2.3.3 Backwater Effects in Canada

A first estimate of the backwater effect in Canada of the Pembilier Dam was provided to the Review Committee by the Corps of Engineers. The limited analysis that has been done to date indicates that at the design flood level, a flood with approximately a 2% probability of occurrence in any year, the reservoir created by the Pembilier Dam would flood an area of about 3200 acres, all within the United States. In the event of a flood with a 1% probability of occurrence in any year an area of 3550 acres would be flooded, but the backwater effect in Canada would be confined to the channel of the Pembina River. At the spillway design flood level, a flood with about a .01%