

Rainwater Drainage in Eastern Santiago, 1998

Summary:

The study originated in a request for a social assessment of rainwater drainage options in Eastern Santiago, demarcated on the north by Quebradas de Quinchamáli, on the south by Nido de Águilas, and on the west by Canal San Carlos.

The study incorporated methodological improvements and included separate assessments of the different solutions proposed (collectors and other options) to determine their true benefits, analyzing different project scales for each option and including urban expansion scenarios. The assessment of benefits was based on the “damage avoided” approach, applying the model proposed in the project “Rainwater Control: Application to the Locality of Colina,” prepared by CIAPEP '92.

Based on the information collected, it was possible to estimate the costs of street cleanup and damage to homes and furnishings that would be avoided with each project alternative for each hydrological year. Lastly, an economic assessment was conducted to determine the average damage avoided, obtained from hydrological simulations for the past 30 years in Santiago and establishing, for each project scale, the damage that would be prevented under these hydrological scenarios.

In this way, the team identified the project scale that produced the highest NPV for each flood zone. As a result, it was concluded that in general, the proposal for a collector on Avenida Larraín and the expansion of the Quebrada de Ramón canal were socially profitable, as both would prevent damage to homes and furnishings. The proposals

involving collectors that prevented damage only on public roads were determined not to be profitable at all scales studied.