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THE BENEFIT OF SOIL EROSION CONTROL
IN PALMERSTON NORTH AND
SURROUNDING AREAS

A thesis presented in partial fulfilment of
the requirements for the degree of
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ABSTRACT

Soil erosion is a major cause of land degradation in New Zealand. In the Manawatu area, including Palmerston North, the conversion of original vegetation to farm land, began at the time of its settlement by Europeans in the 1850's. This left rivers free to erode alluvial banks and change course, resulting in significant areas of high quality alluvial soils being replaced with poor quality gravels. Soil erosion also imposed substantial costs on the community through the loss of pastoral production and soil fertility, widespread damage to public and private assets, a reduction in water quality through sedimentation, and degradation of the habitat for wildlife and in-stream biota. Soil conservation activities produce benefits that do not only accrue to the land owners, but also to others in the region and to future generations. However, identification of the off-site benefits of soil erosion control appears to have been inadequately assessed and targeted. This study attempts to measure the benefit of soil erosion control received by residents in Palmerston North and surrounding areas. The research was undertaken by mail survey, using contingent valuation methods to elicit peoples' willingness to pay for the current level of soil erosion control and the willingness to pay for further increased levels of soil erosion control. The results showed that 54.6 % of respondents are aware of soil erosion effects in the area. The perceived benefits (as reflected in WTP) of the current level of soil erosion control varies from \$204,321 to \$1,393,666.95 per year whereas the benefit of having further increased levels of soil erosion control ranges between \$320,083.07 - \$1,020,998.63. In ascertaining the total value of soil erosion control, respondents took into account the preservation value, comprising bequest and existence value, in addition to use value and future use value.