

ABSTRACT

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Research Title : “Analysis and Calculation of Land Erosion Rate to
Estimate Sediment Transportation of Batang Arau
Watershed in Padang Using USLE, MUSLE, and
RUSLE Methods”
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Problems in the Batang Arau watershed are increasing along with the increasing population in Padang. Land clearing to sloped areas and protected forests resulting in degradation in land quality which can affect several factors including the amount of sedimentation.

Therefore, an analysis of the calculation of land erosion rates to estimate the sediment transport of the Batang Arau watershed was carried out. This study aims to analyze the characteristics of the Batang Arau watershed, how the watershed characteristics such as the watershed used to erosion. The calculation and analysis are done using the USLE, MUSLE, and RUSLE methods. Based on calculations using the USLE, MUSLE, and RUSLE methods, the magnitude of the erosion rate of the Batang Arau watershed is 55.68 tons/ha/year, 68.241 tons/ha/year, and 70.81 tons/ha/year. And the comparison of the magnitude of erosion that occurs in watersheds Batang Arau is 1 : 1.27 : 1.22.

Keywords : Watershed, Erosion, USLE, RUSLE, MUSLE