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Cost and benefit analysis of Low Impact Development (LID) for stormwater management in an urban catchment in Norway

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There has been a surge of interest in the field of urban flooding in recent years, due to the growth of cities and the increase in frequency and magnitude of extreme rainfall events. Hydrological modeling is a useful tool to understand urban floods and compare different stormwater management solutions. In this study, we use the Storm Water Management Model (SWMM) in an urban catchment, Grefsen in Norway, to analyze the effects of different Low Impact Development (LID) methods to reduce combined sewer overflow (CSO). Additionally, we examine the cost of these solutions and find an optimized solution in terms of maximum effects and minimum cost. The results are useful for decision-makers to achieve sustainable stormwater management.

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