Attenuation of Waves Across Living Shoreline Sills
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The validity of a model of wave energy dissipation based on the conservation of energy flux has been analyzed, using data from three living shorelines located along the coast of North Carolina with varying sill structures. This study evaluated and optimized representations of wave breaking and friction within the model to improve the representation of sill features in living shorelines given different incident wave characteristics. It was determined that the model captures wave attenuation across sills with a mean average error (MAE) less than 1 cm at all sample sites. However, results show that error is dependent on wave conditions. Possible improvements to the model and factors controlling this dependency are discussed. The results of this study will ideally aid in the evaluation and design of living shorelines and direct future research of wave energy dissipation across bottom topography.