Investigating the Influence of Tidal Distortion on Material Transport and Contaminated Sediment for Diadromous Fish Habitat in a Tidal River System

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This dissertation aims to comprehensively examine the relationship between sediment transport dynamics and diadromous fish habitat, with a particular focus on understanding the potential implications of sediment contamination. The research objectives include investigating the impact of tidal distortion on material transport through field observations, developing a suite of models that quantifies the geographic range and location of spawning and juvenile diadromous fish habitat using habitat suitability indices, and considering the potential impacts of this transport phenomena on fish habitat when the sediment is contaminated. This research encompasses sediment contamination, tidal distortion, and habitat modeling to comprehensively investigate their combined effects on diadromous fish habitats.