



## **The Economic Benefit of Avoided Floodplain Development in the Conterminous United States**

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Ongoing development in natural floodplains increases flood exposure and damages while compromising wildlife habitat and ecosystem services. However, incomplete maps of flood hazard limit a comprehensive understanding of the expected exposure and damages. This study uses Fathom-US, a 30 m resolution 2D hydrodynamic flood hazard model of the entire conterminous United States, in combination with development projections from the US Environmental Protection Agency's Integrated Climate and Land Use Scenarios project to calculate potential flood damage to future floodplain developments. Acquiring the 856,249 km<sup>2</sup> of remaining unprotected natural lands for conservation in the 1 in 100-year floodplain would cost \$222 billion, yet would avoid approximately \$732 billion of potential damages to future developments that would be incurred from a single 100-year flood event. In the majority of US counties (71%), acquiring all the unprotected natural areas in floodplains would be less expensive than the potential damage to new buildings from a single 100-year flood under high growth development projections. Conservation of remaining natural floodplains avoids unnecessarily increasing the economic and human costs of flooding, while simultaneously providing increased habitat and ecosystem services, including the potential to store and convey floodwaters to reduce flooding in adjacent areas.