



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2002LA4B

**Title:** Flood Risk Mapping of the New Orleans Area

**Project Type:** Research

**Focus Categories:** Floods, Hydrology, Surface Water

**Keywords:** Damage, exceedance probability, frequency distribution, return period

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**Congressional District:** LA - 6th

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**Abstract**

The conventional methods of incorporating risk in floodplain delineation, and design of drainage systems and surface impoundments are the safety factor and return period. These methods are, however, inadequate and do not directly consider the damage distribution. This proposal argues for incorporation of a more comprehensive definition of risk based on three aspects: (1) scenario or cause identification, (2) probability of that scenario, and (3) the consequence of that scenario. Using this risk definition, a risk methodology is proposed for determining flood risk in the New Orleans area and then constructing a flood risk map of the area. This methodology can be easily extended to other areas of Louisiana. The risk map can be employed as a tool for making real-life decisions. The risk methodology will be verified using historical data on extreme rainfall, floods, and damage that have occurred in the New Orleans area.