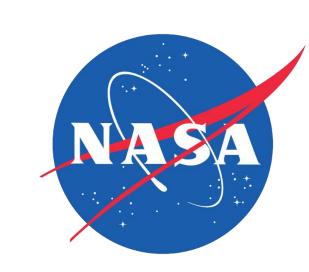


Assessing Environmental and Socioeconomic Factors of Urban Flood Vulnerability in Kansas City, Kansas



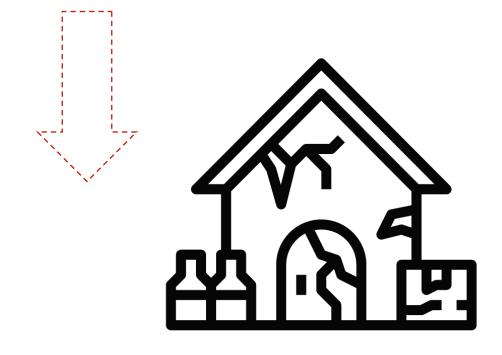


Disproportionately impacting historically marginalized urban neighborhoods

Pluvial Flooding Over-saturated Ground Drainage System







High Concentrations of Impervious Landcover High Precipitation Rates Overflow in Combined Sewer and Stormwater Systems



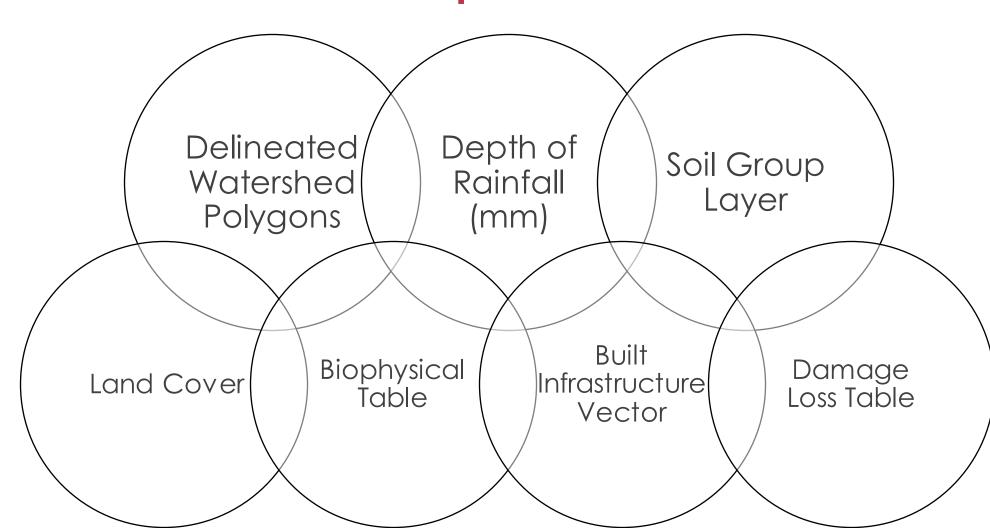
Generate, Detect, and Identify

Examining precipitation through satellites



National Capital Project's Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) Urban Flood Risk Mitigation Model

Model Input Variables

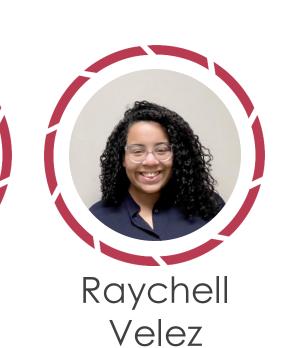








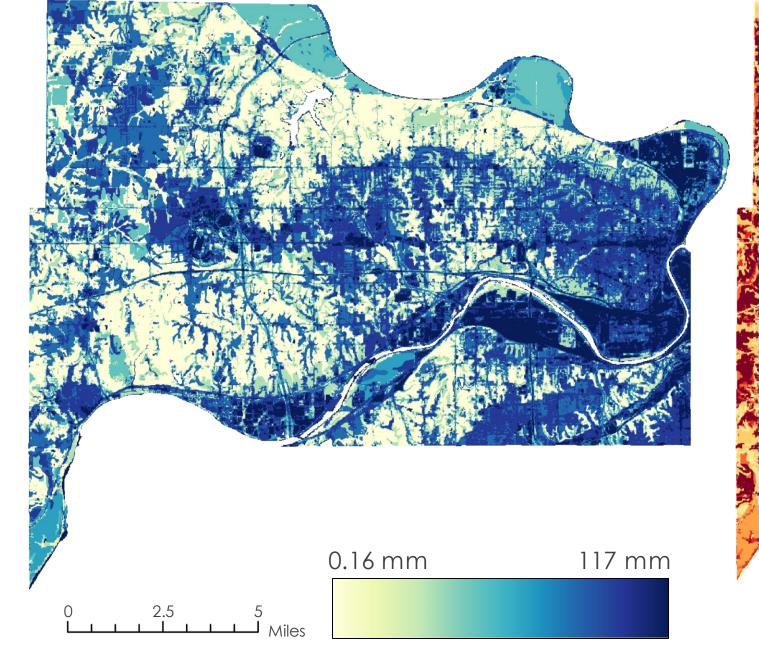
Hadwynne Gross

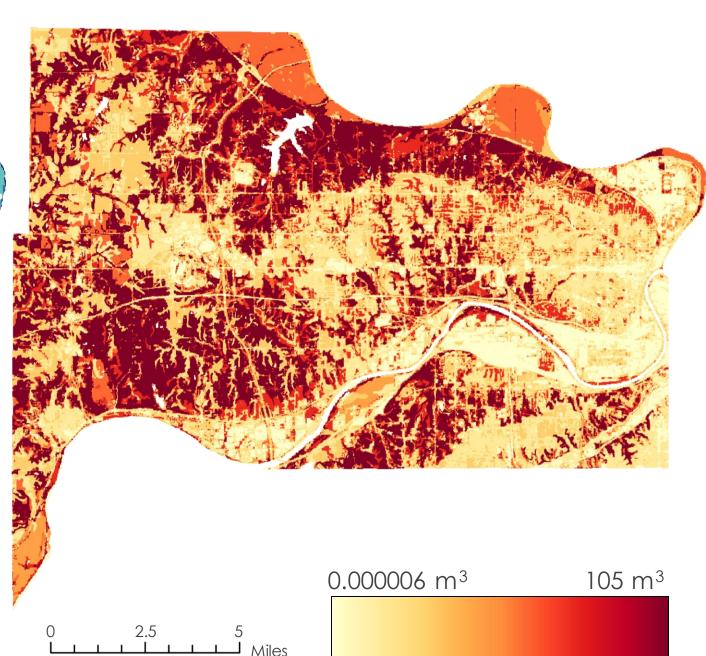


InVEST Urban Flood Risk Mitigation **Model Results**

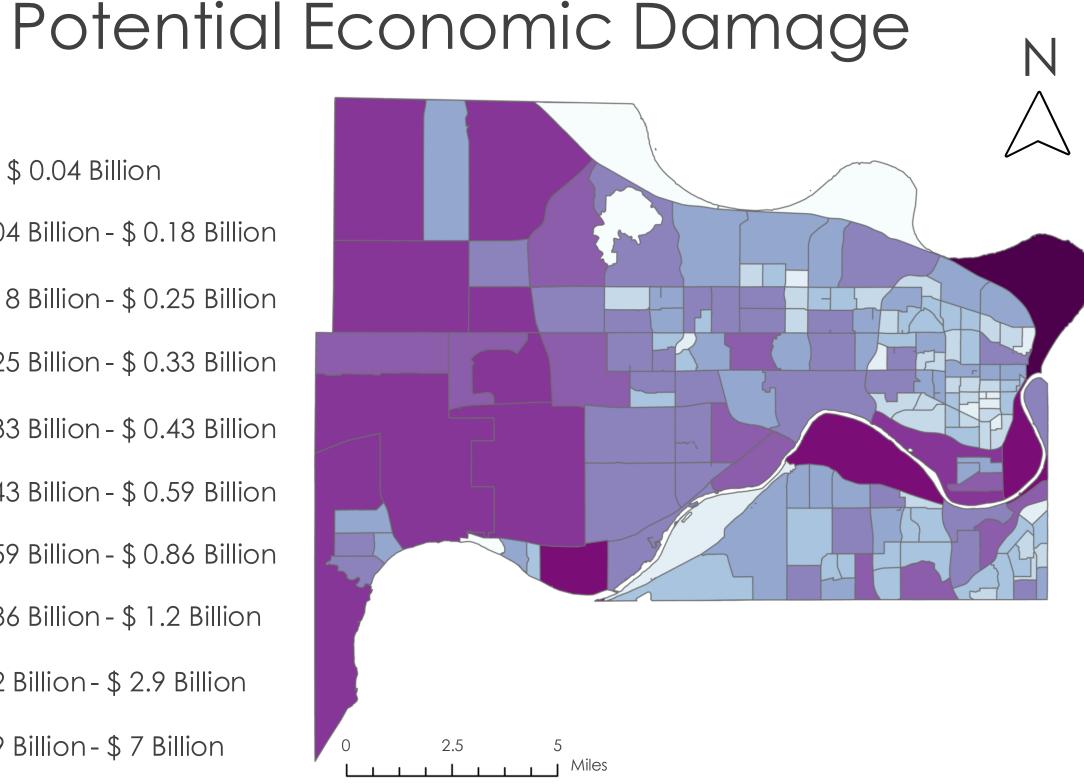
Runoff

Retention

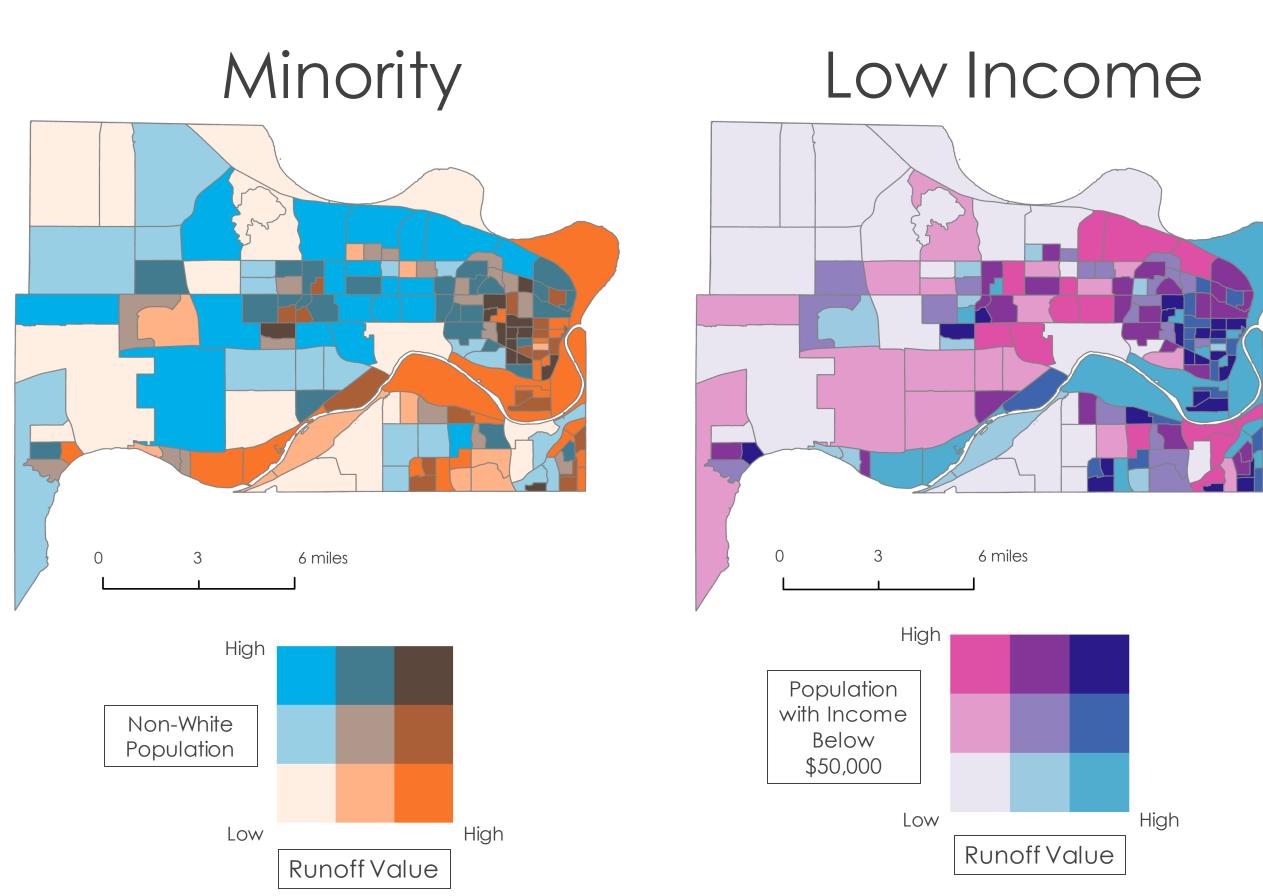




\$ 0 - \$ 0.04 Billion \$ 0.04 Billion - \$ 0.18 Billion \$ 0.18 Billion - \$ 0.25 Billion \$ 0.25 Billion - \$ 0.33 Billion \$ 0.33 Billion - \$ 0.43 Billion \$ 0.43 Billion - \$ 0.59 Billion \$ 0.59 Billion - \$ 0.86 Billion \$ 0.86 Billion - \$ 1.2 Billion \$ 1.2 Billion - \$ 2.9 Billion \$ 2.9 Billion - \$ 7 Billion



Environmental Justice



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- Science Advisor: Dr. Kenton Ross (NASA LaRC)
- ▶ Fellow: Tyler Pantle

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