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### NON-COMPETITIVE DIVISION

#### Dam Risks in Disasters: A Puerto Rico Case Study for Hurricane Fiona

As the impact of climate change is felt across the world, it's important that communities take steps to increase their resilience against extreme weather events, such as hurricanes. Part of this involves maintaining and improving key dam infrastructure, which are particularly susceptible to the excessive precipitation and flooding associated with these events.

In September 2021, the FEMA National Dam Safety Program (NDSP) and National Integration Center (NIC) Technical Assistance Branch began a “Planning for Dam-Related Emergencies” Collaborative Technical Assistance (CTA) project in Puerto Rico. The CTA assisted communities at risk for flooding due to operational discharge or dam-related infrastructure failure gain a better understanding of the consequences of dam-related emergencies. Throughout the process, the CTA engaged emergency managers and dam owners and operators, along with federal, regional, and local governmental partners, in a facilitated process to build relationships, develop risk-informed plans, and collaborate with community partners to achieve the goal of increased preparedness to dam-related hazards. The Puerto Rico CTA concluded in August 2022, just prior to the devastation caused by Hurricane Fiona, which dumped more than 20 inches of rain across much of the island and resulted in widespread flooding and storm-related damages.

In response, and as a follow-up to the CTA, FEMA deployed an Incident Specific Technical Assistance (ISTA) in Puerto Rico. Through a robust post-event data collection process, done in collaboration with CTA partners and stakeholders, the ISTA team conducted more than 30 interviews and site visits to better understand the actions taken by emergency managers and dam owners/operators before, during, and after Hurricane Fiona. The ISTA team also developed detailed models, performed spatial mapping, and created illustrative graphics to represent hurricane-related flooding and help understand dams' influence on flooding.

**Presentation Theme:** Case study to better understand the actions taken by emergency managers and dam owners/operators before, during, and after Hurricane Fiona.

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