DEFINING FLOOD PRONE AREAS AND ESTIMATING FLOOD EXTENT AREA AND VOLUME

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As part of its Climate and Water Resilience Metrics effort, the South Florida Water Management District (SFWMD) is compiling flood reports and event impact summaries to identify areas with recurrent flooding to direct collection of high-water marks and remotely sensed data. The overall objective is to identify areas to monitor for the collection of data to support delineation of flood extent and to estimate flood volume. As a first step, information related to flood occurrence in response to rainfall, storm surge, or tidal events, was inventoried from technical reports, internet sources, high water marks, and public and agency flood reports. Areas with known recurrence and areas identified as having multiple event impact records were delineated as preliminary flood prone areas. These areas will be used to inform and prioritize high water mark collection and sensor deployment activities and could potentially be used to task remote sensing data acquisition. Once flood extent is defined, high resolution topographic data will be used to calculate flood volume.

To share this information with South Florida Flood Resiliency partners, a community HUB site is being developed. This site will provide access to data collection tools and reporting that summarizes event information and provides historical context derived from the compiled inventory of events. The long-term vision is to establish a resource that can notify municipalities, counties, and local drainage districts of incoming flood reports to facilitate mobilization of resources to collect high water marks. These high-water marks would then be used validate remotely sensed flood extension delineations and model results or define flood extension within those areas where marks are measured.

PRESENTER BIO: Christine Carlson leads a team of geospatial professionals in the development and maintenance of enterprise geospatial data and the deployment of geospatial products and tools. During her over 30-years long career, she has worked in a variety of capacities and fields including modeling, restoration evaluation, and remote sensing.