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### NON-COMPETITIVE DIVISION

#### Creating an Agile Framework and Toolset for Evolving IDSS Needs in the National Weather Service

Timely and relevant weather and water forecasts, watches, and warnings are vital to the success of the National Weather Service (NWS) and its ability to carry out the mission of protecting life and livelihoods and the advancement of the Nation's economy. In parallel to that are the evolving needs related to providing Impact Based Decision Support Services (IDSS). IDSS are forecast advice and interpretative services the NWS provides to core partners such as emergency personnel to help make decisions when weather, water and climate impacts the lives and livelihoods of the American people. To ensure the organization and delivery of IDSS can meet the demands of NWS core partners, the IDSS Management System (IMS) is being developed in an iterative, agile fashion to allow for quick upgrades and improvements.

The NWS is a uniquely talented and mission-dedicated workforce that has developed a variety of IDSS tools over the years as new demands have been introduced. For example, several relationship building, situational awareness, and service evaluation tools are already in use across the NWS. The IMS will prioritize, support, and grow these existing tools as appropriate,

while also finding new ways to meet emerging field demands for IDSS. This will include, but not be limited to, providing awareness and interrogation capabilities for weather hazards and socially vulnerable communities, threshold analysis for tidal and non-tidal flooding, and tools that support the messaging of uncertainty and probabilistic forecasts. The expected capabilities, along with a detailed overview of the IMS's Initial Operating Capability centered around a modernized partner database, will be discussed. In addition, a brief synopsis of the IDSS Engine, a system being developed in parallel to IMS by the NOAA Global Systems Laboratory (GSL), that will allow for visualization and alerting of a range of possible weather related outcomes via foundational probabilistic datasets, will be presented.

**Presentation Theme:** The theme of this presentation is the background and future vision of the IDSS Management System (IMS). The IMS aims to provide meteorologists and hydrologists with the tools they need within a common, cloud based framework to support NWS core partners (i.e. Emergency Management, Media, Federal/State Government). The IMS will also fully engage NWS core partners to ensure needs are met in innovative and evolving ways.

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