

Integrated Water Resources Science and Services (IWRSS) – NOAA, USACE and USGS

Requirements for the National Flood Inundation Mapping Services Fact Sheet

DESCRIPTION: The IWRSS agencies share a common goal of providing flood inundation map (FIM) products to support stakeholders for all phases of the flood risk management lifecycle. Flood inundation maps display the consequences of current and forecast river flood impacts and provide an important source of information to the planning, response, and mitigation cycle for community planners and emergency managers. Currently, all three IWRSS agencies are actively developing valuable flood inundation maps for various purposes and have different approaches for producing flood inundation maps. Respective agency mapping approaches could be better integrated into a common operating picture to more efficiently and effectively produce and share data, models and maps per agency release policies. FIM stakeholders and the public would benefit from the federal agencies adopting a consistent, common approach to flood inundation map development and dissemination.

KEY OVERARCHING REQUIREMENTS: As proposed by the IWRSS Flood inundation Mapping Requirements Team, the requirements for an integrated National Flood Inundation Mapping Service are focused on developing consistent mapping products and establishing data sharing requirements for a common operating picture.

Uniform Mapping Product Requirements:

- Uniformly scope and develop flood inundation maps based on common standards and methods, and
- Format mapping products consistently,

Data Sharing Requirements:

- Develop a common operating picture to create consistent maps and share data, models and maps;
- Enable online access to interactive maps and allow them to be downloaded and printed; provide access to complete project data, metadata and reports via download; and
- Ensure compliance with Open Geospatial Consortium (OGC) standards.

NEAR-TERM GOALS AND NEXT STEPS: The Requirements Team identified near-term goals that could be met during the follow-on design phase without substantial resource commitments. Several of the goals can be addressed by simply increasing communication and coordination among the IWRSS agencies.

1. Finalize and adopt a set of common IWRSS FIM standards.
2. Work with the System Interoperability Data Synchronization team to implement the FIM requirements related to the sharing of data across IWRSS agencies.
3. Define common scoping methods and a QA/QC checklist for IWRSS projects to facilitate and ensure more consistent procedures for developing maps;
4. Develop common project documentation and reporting standards for IWRSS FIM projects.
5. Design an on-line IWRSS data registry to provide a list of IWRSS FIM projects and links to project data.
6. Establish a panel of stakeholders to ensure that products remain relevant to the stakeholder group.

ROUGH ORDER OF MAGNITUDE (ROM) EFFORT: Implementation of near-term goals is expected to largely be an effort using existing systems and staff. The equivalent of six FTE's (shared and spread across multiple staff from the three agencies) will be needed for 18-24 months to complete the near-term goals. This project should be a high priority activity for all involved, with some required travel. Beyond establishing the common operating picture, additional human and fiscal resources are necessary to address the Information Services Framework (ISF) requirements; build and evaluate a prototype, and recommend the final design. A ROM cost for implementing the ISF is dependent on the level of effort adopted by the IWRSS agencies not known at this time, but will be determined by the activities of the Design team.

PAYOFF EXAMPLES: Benefits of a more common federal approach to FIM include:

- Cost efficiencies resulting from sharing procedures, tools and possibly systems;
- Quality improvements resulting from improved sharing of gage, stage forecast, reservoir regulation, and other information already developed by partnered agencies for FIM; and
- Improved accessibility, informed decision support, and enhanced flood communications.