ASFPM POLICY COMMITTEE WORKPLAN
MAPPING & ENGINEERING STANDARDS
2021-2022
November 12, 2021

1.0 Overview

The primary mission of the Mapping and Engineering Standards Committee is to provide policy guidance and support for floodplain mapping and engineering issues to foster reduction of future losses, costs and human suffering caused by flooding. Historically, this committee has had major impacts on FEMA's Flood Mapping Program, requirements for map modernization, Risk MAP and the NFIP and addressing technical issues related to flood hazards such as levees and dams.

Co-chairs for the committee are:
Maria Cox Lamm, South Carolina Department of Natural Resources
Brooke Seymour, Mile High Flood District, Colorado

This committee will utilize the entire listing of members who have expressed an interest in the committee as maintained by the ASFPM executive office. A sub-committee list for various tasks will be maintained by committee chairs. In developing and completing the activities outlined in this workplan, committee leadership will attempt to solicit assistance from a core group of members who will serve as Capability Leads or Topic Leads. These members should have expertise or strong interest in a particular area or topic. The committee chairs can delegate action items to the appropriate Capability Lead(s), who in turn can coordinate with other committee members to complete the action and/or provide the deliverable. Some specialty areas may include:

- Hydraulics & Hydrology
- Coastal Mapping
- Levees & Dams
- Technology/Digital Data Management
- CTP Issues

A standing sub-committee of M&ES Committee focuses on the Cooperating Technical Partners (CTP) program. The goal of this sub-committee is to identify successes and challenges of the overall program, inspire collaboration among CTP's, and share best practices among mapping partners. This sub-committee is co-chaired by:

Darryl Rockfield, Missouri State Emergency Management Agency
Co-Chair: TBD

Section 2 of this workplan lists the 2021-2022 committee tasks and describes the work required to complete these items. Many items directly support the FY22 Goals and Objectives for ASFPM that are mapping and/or engineering related.

2.0 Task Outline

2.1 FY-21-22 ASFPM Goals and Objectives (Board approved: May 7, 2021)

Following is a list of the Goals and Objectives adopted by the ASFPM board that directly influence the work of the Mapping and Engineering Standards Committee. These are provided as reference for the work tasks identified in this plan. Many other adopted goals and objectives are indirectly supported by M&ES tasks. Those are not listed below.

1.2 Develop strategies to promote ongoing identification, updating and maintenance of flood hazard and flood risk data, for the purpose of improved hazard mitigation, development standards and flood insurance.

1.2.1 Support the successful implementation of the National Flood Mapping Program (NFMP) including Congressional education for funding and awareness, providing input to FEMA on the ongoing operations of the program, such as products, data and educational tools.

1.2.2 Prioritize enhancement of state and local capacity through the Cooperating Technical Partners (CTP) program.

1.2.3 Support adequate funding for NFMP, CTP program, stream gage infrastructure and LiDAR.

1.2.4 Support NOAA in establishing permanent funding and authority for more frequent updates to the precipitation analysis (ATLAS-14) and to include the impacts of climate change.

1.3 Promote local, state and Federal strategies that provide research, policies, and actions to incorporate resiliency strategies that support adaptations to a changing climate.

1.3.1 Promote and support the implementation of higher standards and setbacks for all projects (federal and non-federal) to accommodate future conditions.

2.2 Ongoing M&ES Activities

The following are the ongoing tasks and activities the M&ES Committee strives to complete each year:

Operating Partners Meetings (supports Goal/Objective's 1.2.1 & 1.3.1): Use biannual Operating Partners meetings to further committee goals, provide direct programmatic feedback to FEMA HQ, and resolve technical and policy issues raised within the ASFPM membership. (Brooke/Maria/Other committee members).

Technical Mapping Advisory Council (supports Goal/Objective's 1.2.1 & 1.2.3): Review information and recommendations that arise from the TMAC committee. Provide support to Suzanne Jiwani (ASFPM rep). (Brooke/Maria/Darryl)

CTP Sub-committee Calls (supports Goal/Objective 1.2.2): Organize and facilitate regular calls and outreach with CTP sub-committee and general committee membership. Coordination and collaboration with ASFPM Flood Science Center, FEMA CTP Program Coordinator, and FEMA CTP Community of Practice (CoP). (Brooke/Darryl)

CTP Webinars (supports Goal/Objective's 1.2.2): Conceive, develop, and present webinars on topics relevant and beneficial to CTPs that support capacity building. (Brooke/Maria/Darryl)

Policy and Rule Making Review (supports Goal/Objective's 1.2.1, 1.2.3, & 1.3.1): Review ongoing federal policy and rule making activities, including proposed federal mapping appropriations and FEMA Guidelines and Standards updates. Coordinate with other ASFPM committees as appropriate. Provide input and comments on issues that are relevant to the committee mission. (Brooke/Maria/Other Committee Members)

Annual Conference: Prepare for the national policy meeting and lead discussions at the annual committee meeting. Prepare agenda lineup of topics and speakers; and prepare notes of annual committee meeting for distribution to the committee members and/or posting on the website. (Brooke/Maria). Lead discussions at the annual CTP sub-committee meeting and coordinate logistics on a CTP social event at the annual conference. (Darryl)

Annual Report and Work Plan: Prepare annual report and develop workplan (Brooke/Maria)

Conference Calls & Committee Retreat: A co-chair will attend all conference calls and both co-chairs will attend the conference retreat. (Brooke/Maria)

Quarterly Committee Calls/Virtual Meetings: Organize, facilitate and complete action items associated with quarterly group conference calls. (Brooke/Maria)

Information Sharing: Explore social media options for communicating with committee members and work to identify a committee member as a webmaster. Maintenance and update of the M&ES Committee ASFPM webpage.

2.3 M&ES Committee Work Items:

In support of the mission to provide policy guidance and support for floodplain mapping and engineering issues, the M&ES committee and its CTP sub-committee will continue to develop strategies and promote support for the ongoing identification, updating and maintenance of flood hazard and flood risk data. In addition to the ongoing activities and functions of the M&ES Committee, there are several additional efforts and initiatives that have been prioritized for the 2021-2022 work cycle. Some of these activities may result in Discussion/White Papers related to policy issues while others will be administered through ongoing coordination with ASFPM Flood Science Center, FEMA, CTPs or other operating/mapping partners. Any Discussion/White Papers produced will be consistent with the ASFPM Goals and Objectives and follow the association's development policies and procedures.

ASFPM Flood Mapping for the Nation – report update

Flood Science Center project collaboration: The Flood Science Center has a number of ongoing projects that will require input from the M&ES Committee, including (but not limited to):

- **Benefits of 2D modeling:** As 2D modeling becomes more prevalent, there is an interest in mapping Special Flood Hazard Areas and floodways using 2D modeling technology. While 2D steady state models are currently the most common, interest in unsteady 2D models are gaining ground. Case studies of these efforts would document similarities and differences between steady-state traditional 1D methods and more robust 2D steady-state and unsteady methods. The purpose of this comparison is to determine the differences in the extent of the SFHA, and how well these modeling techniques can measure the flood-risk impacts of individual and cumulative development

The M&ES Committee will collaborate with and assist the FSC with these projects, along with providing review and suggestions for the final report deliverables. The CTP Sub-committee also works closely with the Flood Science Center on projects related to the CTP program. (Brooke/Maria)

The National Flood Mapping Program (supports Goal/Objective's 1.2.1): Section 216 of the ''Biggert-Waters Flood Insurance Reform Act of 2012'' established a framework for a formal program for developing and providing flood risk information, that would include:

- Traditional Items included on FIRM's (100-year floodplain, floodway, etc.)
- The 500-year floodplain
- Areas of residual risk associated with levees, dams and other flood control structures
- Potential failure zones associated with levees, dams, and other flood control structures
- Future Condition mapping

Even though this has been spelled out in legislation, there has been little effort by FEMA to date to implement any of these concepts. The M&ES will facilitate discussion regarding this topic, and if warranted, create specific work products with the goal of assisting FEMA in implementing these mapping data elements, and championing funding to these efforts.

2D Modeling issues (supports Goal/Objective's 1.2.1 & 1.3.1): With the advent of the 2D capabilities of HEC-RAS 5.0, SRH-2D and other 2D modeling software programs, there are considerable interest and advances in 2D modeling for floodplain, stormwater, dam safety and other water resources applications. As these types of models become more widely used, modeling, mapping and regulatory issues have arisen that need to be addressed. Work items associated with this topic included:

- Review work products / papers about 2D & Unsteady modeling that may be issued by FEMA or by other organizations (NAFSMA, FMA, etc.) or any Regional guidance that may be available.
- Provide a forum at the annual conference (either during M&ES committee meeting, or an early bird session) for identification of issues for further discussion regarding advanced modeling techniques.
- Provide guidance to mapping partners, including FEMA, on how to incorporate advanced modeling outputs into regulatory and non-regulatory flood hazard products and datasets.
- Facilitate any ad-hoc review groups to address discussion topics.

(Brooke/Maria)

2.3 CTP Subcommittee work items:

CTP Support (supports Goal/Objective's 1.2.2 & 2.1.1) - FEMA has funded ASFPM to help support Cooperating Technical Partners. The project involves documenting best practices and providing training via quarterly webinars. In conjunction with this effort, a Mapping & Engineering Standards sub-committee has been established that focuses on CTPs. The ASFPM EO (Alan Lulloff) and various committee members FEMA CTP Community of Practice Steering Committee and associated workgroups. ASFPM has highlighted that the

Cooperating Technical Partner program is just as much about building partnerships as it is about mapping SFHAs. The goals of the CTP Sub-committee include:

- Fostering communication among federal, state, regional, and local mapping partners and data sharing.
- Providing a forum for mentoring and building capabilities in support of CTP and National Flood Mapping Program goals.
- Identifying topics for webinars and best management practices to support the FEMA CTP grant being completed by the ASFPM Office.
- Encouraging and coordinating feedback on CTP issues to FEMA, including program updates, partner engagement, and participation in working groups.

(Darryl)

2.4 2021 – 2022 Topics for Future Development

With the commitment needed to maintain the ongoing tasks and activities, the M&ES Committee is limited on the number of new activities and initiatives that can be prioritized for each year. However, the following activities have been identified as priorities for the committee and in some cases potential paper topics if a committee member desires to serve as task lead. These activities are listed below in no particular order.

- Structure level floodplain analysis
- Base Level Engineering
- LiDAR issues
- Advanced modeling issues
- Atlas 14 update