

Public Meeting - Draft Maps for the Town of Amherst FEMA Floodplain Studies

Jeffrey Burm, CFM - AECOM

June 25, 2019





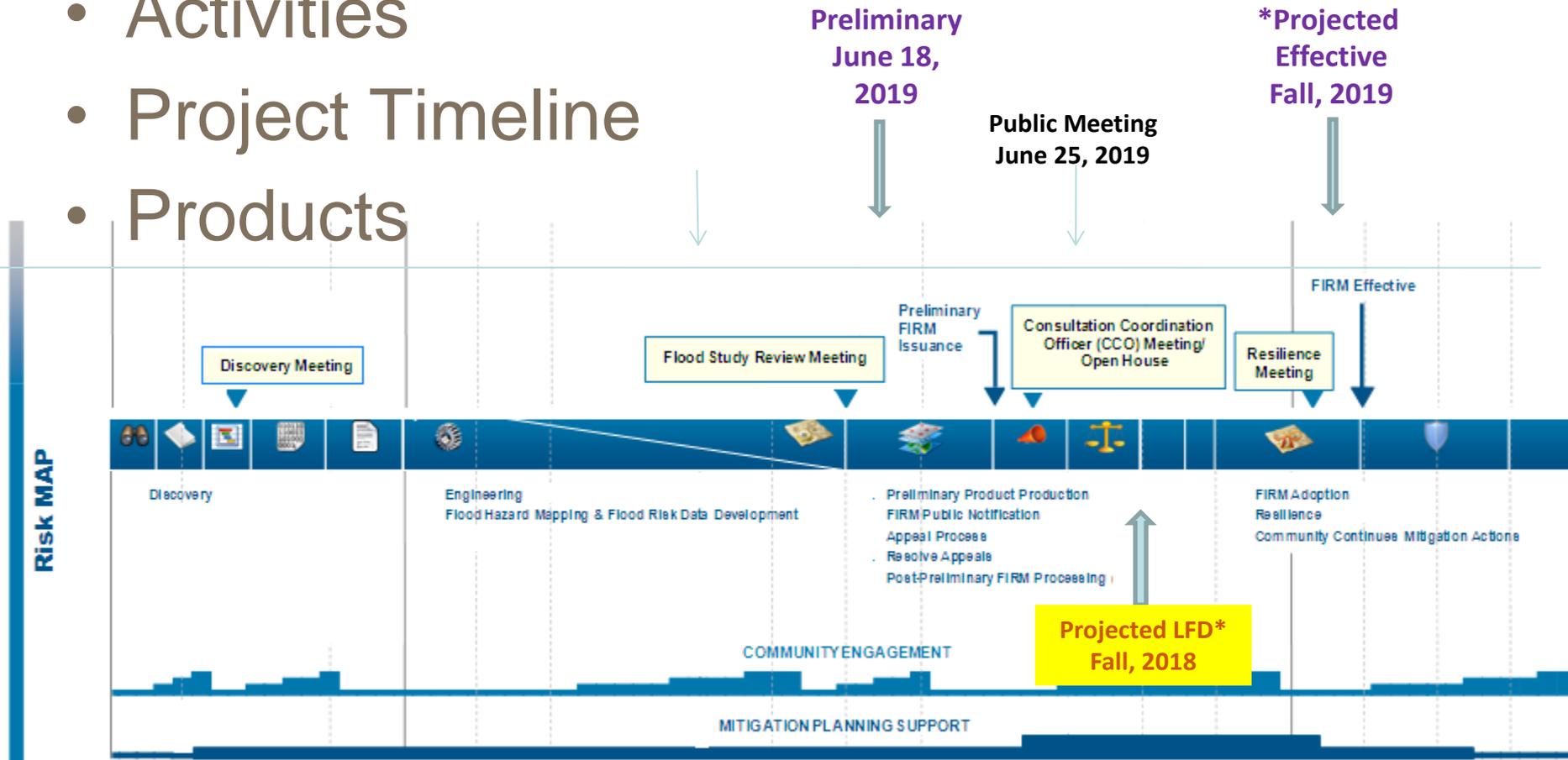
Agenda

- Study Timeline
- Coordinated Needs Management Strategy (CNMS)
- Types Of Studies Performed
- What's Being Updated
- Next Steps
- Involvement From the Community
- Post Preliminary Timeline



Risk MAP Study Timeline

- Activities
- Project Timeline
- Products



***Estimated Date.**

***Estimated Date. Maps Need to be Adopted by Town Council**





Coordinated Needs Management Strategy (CNMS)

- CNMS is FEMA's strategy for coordinating the management of mapping **needs** using modern geospatial technologies and current policies, requirements, and procedures.

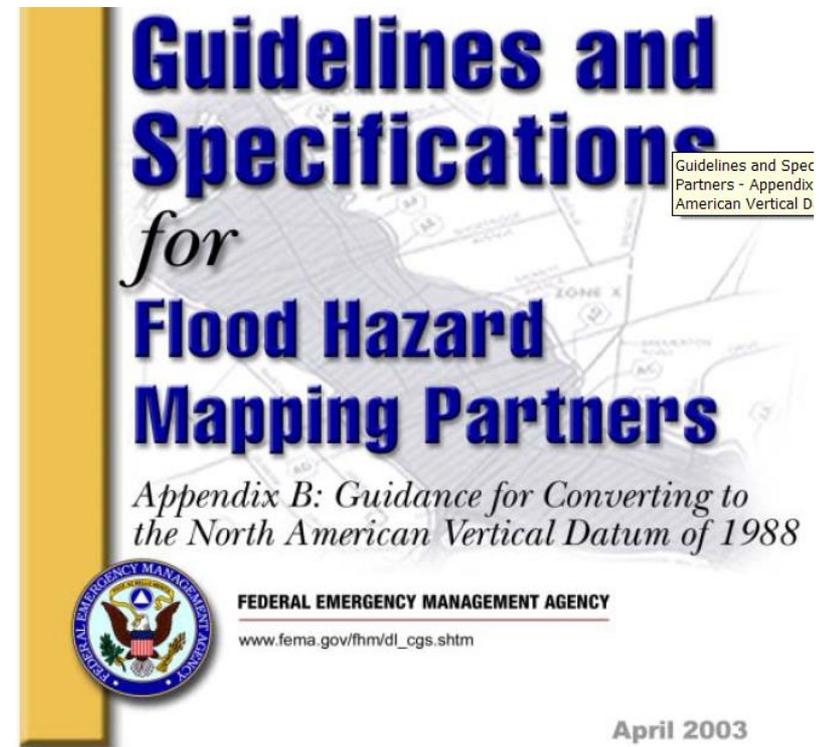
WTR_NM	D_STUDY_TYPE	REACH_LIMITS	Date of Validation	CE_To tal	SE_ Total	VALID_CAT
CNMS Validation Checklist			Validation Data			
Amherst, MA (Hampshire County)						
Eastman Brook ¹	Non-Digital Detailed		8/1/12	0	3	VALID
Fort River	Non-Digital Detailed	From DS corporate limits to Pelham Rd	8/1/12	2	2	UNVERIFIED
Hop Brook	Non-Digital Detailed	From confluence with Fort River to Station Rd	8/1/12	0	4	UNVERIFIED
Mill River	Non-Digital Detailed	From DS corporate limit to Mill St	8/1/12	3	2	UNVERIFIED
Muddy Brook	Non-Digital Detailed	From confluence with Fort River to 950 ft US of Potwine Ln	8/1/12	0	3	VALID
Plum Brook	Non-Digital Detailed	From confluence with Fort River to 1880 ft of Potwine Ln	8/1/12	1	3	UNVERIFIED
Swamp Brook	Non-Digital Detailed	From confluence with Mill River to SR 63	8/1/12	0	3	VALID
Unnamed Trib to Fort River ²	Non-Digital Detailed		8/1/12	2	2	UNVERIFIED
Unnamed Trib to Mill River ³	Non-Digital Detailed		8/1/12	3	2	UNVERIFIED
Unnamed Trib to Swamp Brook ¹	Non-Digital Detailed		8/1/12	0	3	VALID

Datum Conversion



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- Previous FIRM referenced to NGVD Datum
- Conversion to NAVD88
 - Required by FEMA for new FIRMs
- Process described in Appendix B of FEMA's Guidelines and Specifications



Conversion Factor



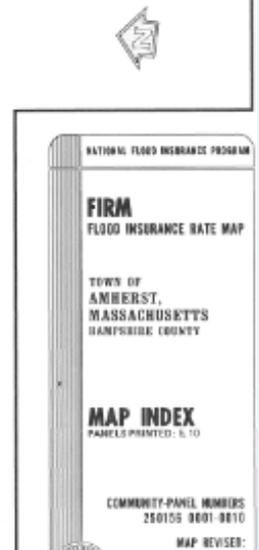
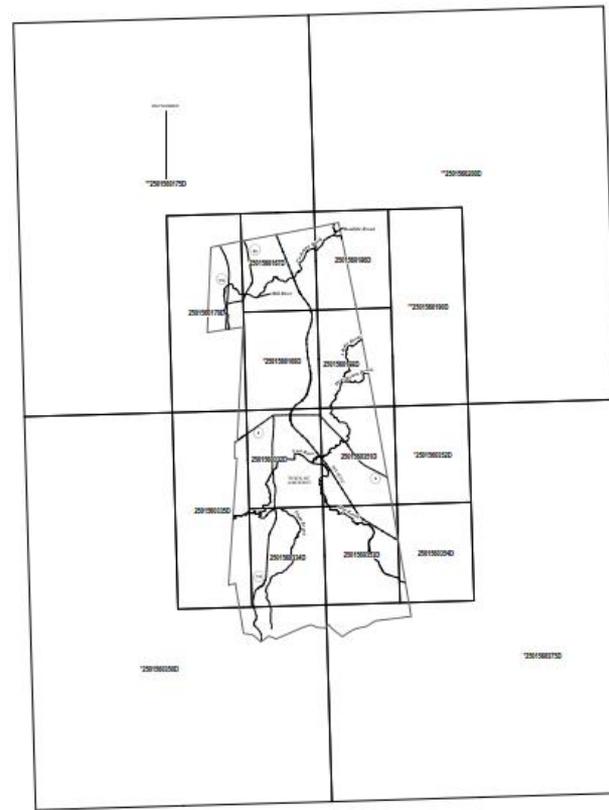
- The previous effective study (1983) as referenced to the NGVD Datum
- All new studies are referenced to the NAVD 88 (North American Vertical Datum of 1988)
- The conversion factor from NGVD 29 to NAVD 88 is -0.6, and from NAVD 88 to NGVD 29 is +0.6. This is relevant only to the redelineation miles

Paneling Scheme

Existing Paneling System
(town-wide format)



New Paneling System
(format based
on USGS quadrangles)



Type of Studies Performed



- Automated Approximate Studies (Zone A)-
 - Update Special Flood Hazard Areas (SFHA) based upon new topography (2009 LiDAR)
 - SFHA's based upon contours and created automatically using AECOM Swiftmap software
 - Studies are model backed with Base Flood Elevation (BFE)(not published).
- Redelineation (Zone AE)–
 - Updating effective studies based upon new topo.

Detailed Studies



- 4 streams (10.9 miles)
 - Fort River
 - Mill River
 - Muddy Brook
 - Plum Brook
- Field surveys of structures
- Revised hydrology and hydraulics
- Mapped with new topography





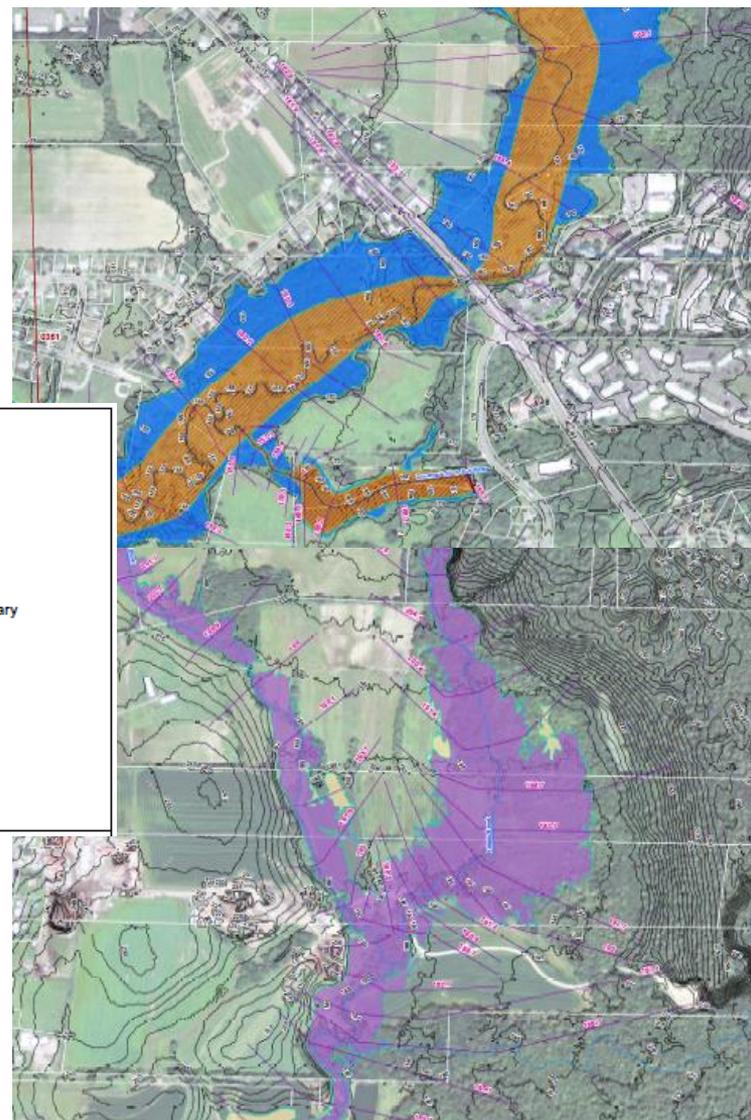
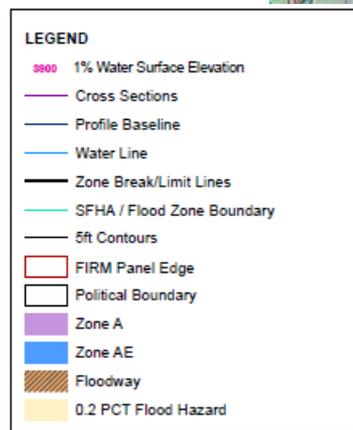
Hydrology and Hydraulics

• Hydrology

- Regional Regression Equations developed by USGS used (2016) released in 2017. Reason for the new study
- The previous study was based upon equations developed from data up to 1974.
- Revised study is based upon equations developed from data up to 1982 and augmented with gage measurements as recent as from 2015 (on Fort River).

• Hydraulics

- Utilized HEC-RAS (an industry standard software developed by USACE).
- Bridges and culverts were measured by field survey crews

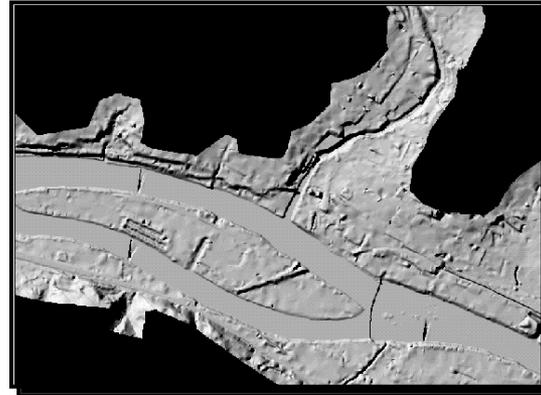


Digital FIRM (DFIRM)



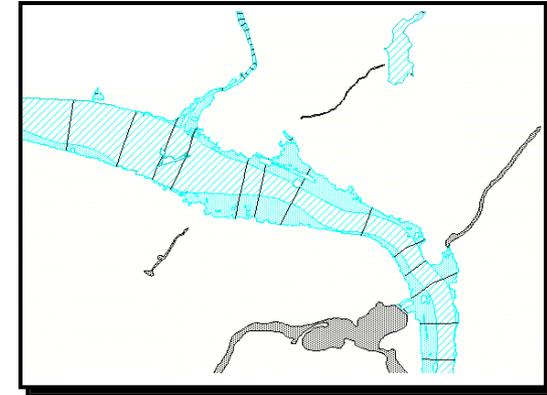
Base

+



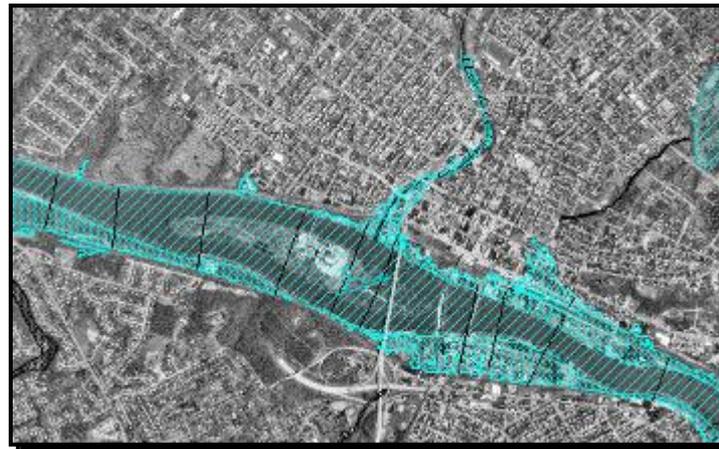
Topography

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Flood Data

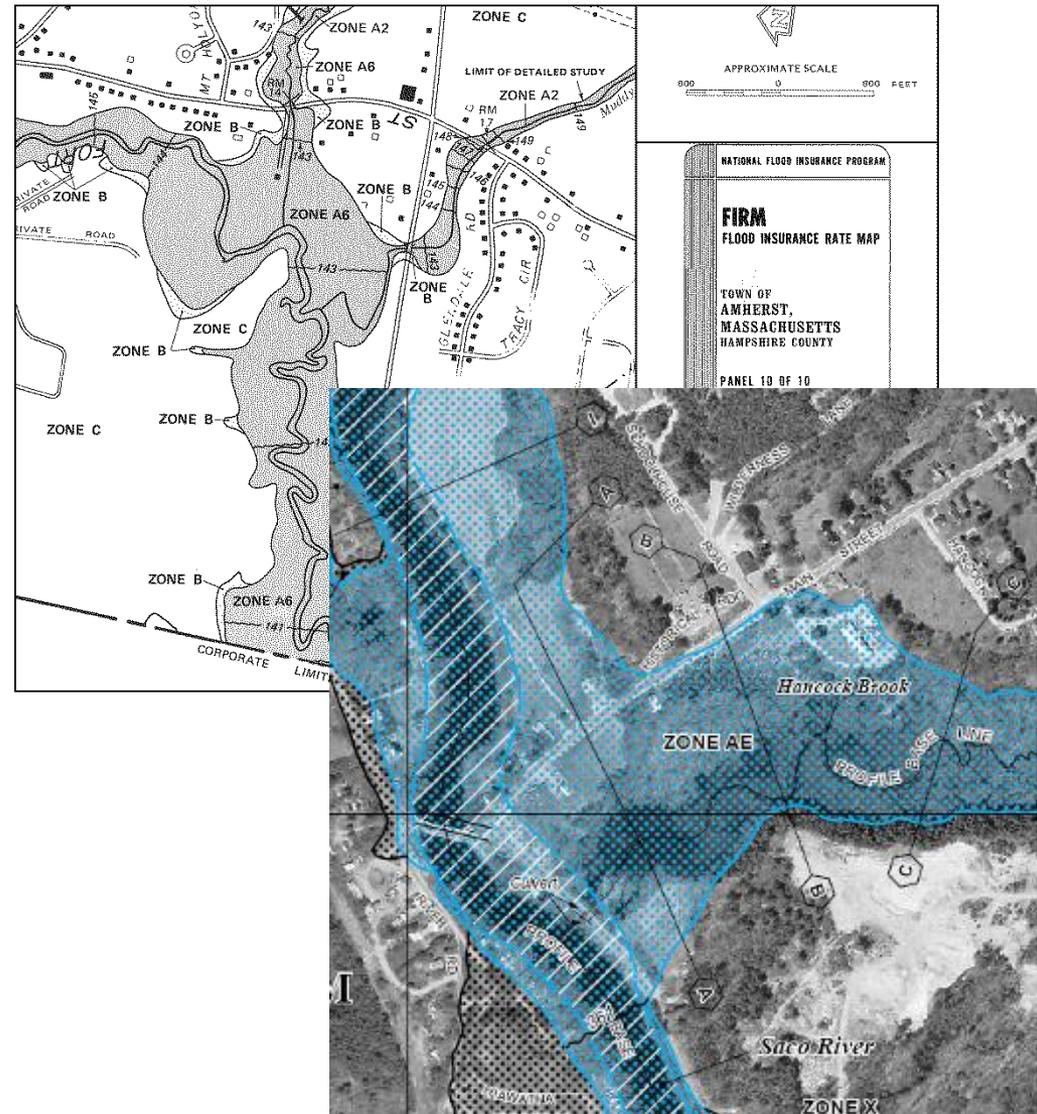
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Digital FIRM

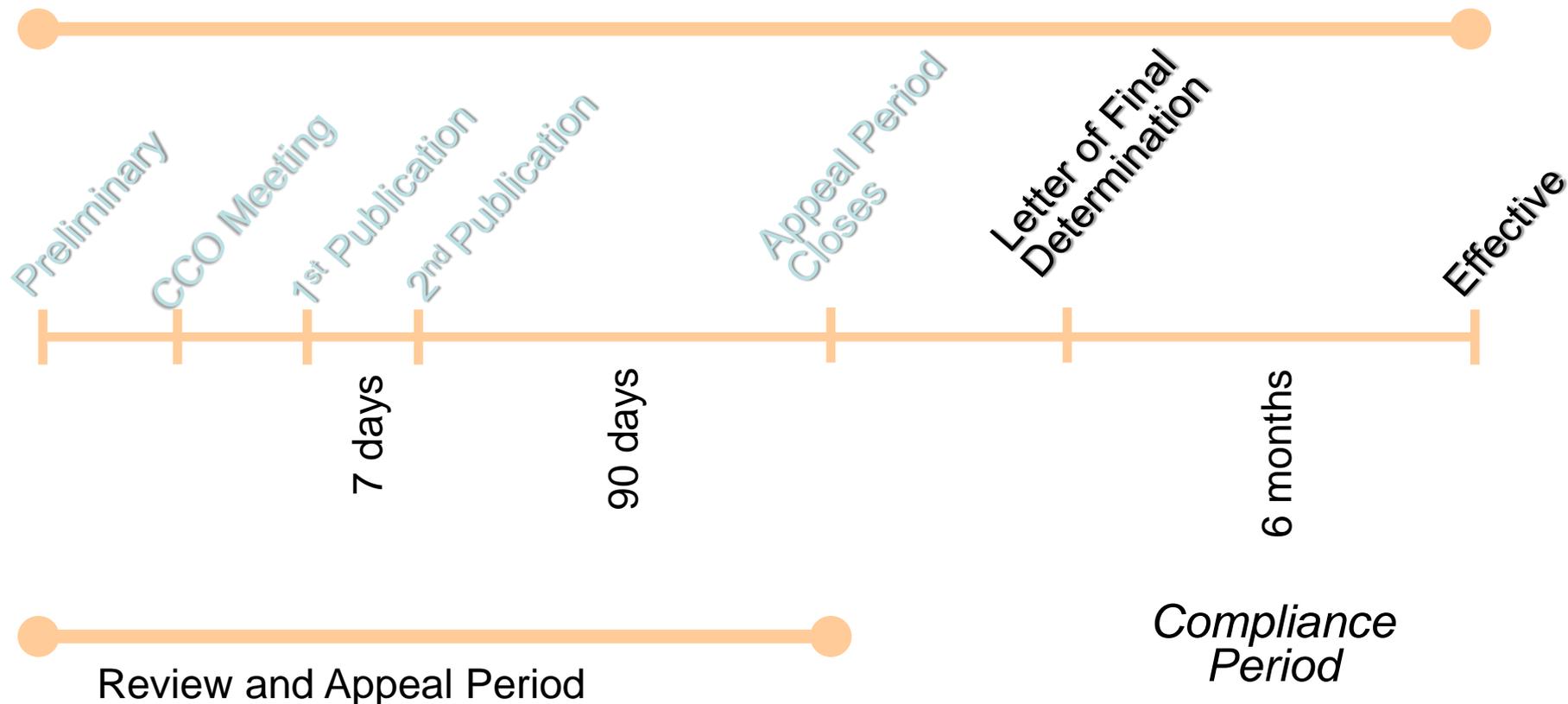
Next Steps

- Post-Preliminary Map Production





Post-Preliminary Phase Timeline



Community Review



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Public Review and Expanded Appeal Period (EAP) Process

Begin reviewing now!

Outreach to your community members
Templates available!

Statutory 90-day Appeal Period:
Publication in Federal Register
Letter to Community Official
Newspaper publication, and...
Maps and data available online!



Expanded Appeal Period (EAP) Process



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Appeals versus Comments under the new EAP process

Appeals :

- Areas showing new or revised Base Flood Elevations (BFEs) or Zone AO depths
- Areas showing new or revised Special Flood Hazard Area (SFHA) boundaries (including both increases and decreases in the extent of the SFHA)
- Areas where there is a change in SFHA zone designation
- Areas showing new or revised regulatory floodway boundaries (including both increases and decreases in the extent of the regulatory floodway)

Expanded Appeal Period (EAP) Process



Appeals versus Comments under the new EAP process

Comments:

- Corporate limit revisions
- Road name errors and revisions
- Flooding source name errors and revisions
- Base map errors
- Other possible omissions or potential improvements to the mapping

MYTHS!



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- *“The Expanded Appeal Period (EAP) means I have more time to submit an appeal.”* **NO**
- *“The 90- day appeal/comment period is my only chance to change FEMA’s maps?”* **NO**
- *“What are my other options?”*
 - Letter of Map Amendments (LOMA): A request to FEMA for removal of individual properties or structures from the SFHA
 - Letter of Map Revisions (LOMR): A request to FEMA to modify an effective Flood Insurance Rate Map (FIRM), or Flood Boundary and Floodway Map (FBFM), or both. Results in the modification of the floodway, BFEs, or the Special Flood Hazard Area (SFHA).

Post-Preliminary Processing



- Summary of Map Actions (SOMA)
 - Background
 - Letters of Map Change (LOMCs) are legally binding changes to the map
 - Summary of Map Actions is an assessment of all existing LOMCs compared with the new FEMA maps

Post-Preliminary Processing



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- The compliance and map adoption period begins at the date the Letter of Final Determination is sent, and ends at the effective date.
- During this period, community officials review, and if appropriate, revise the community's floodplain ordinances to ensure they are compliant with NFIP regulations.
- To avoid suspension from the NFIP, the community must adopt a compliant floodplain management ordinance. Communities should contact their State NFIP Coordinator's Office for model language and any questions regarding higher standards.
- Once the State has reviewed the ordinance and the community has adopted it, the ordinance must be approved by FEMA before close of business on the effective date. Do not wait until the last day to adopt your ordinance!

Points of Contact



- AECOM Contacts
 - Jeff Burm, PM
Jeffrey.Burm@aecom.com
- FEMA Contacts
 - Kerry Bogdan, Project Manager and Senior Engineer, FEMA Region I
Kerry.Bogdan@fema.dhs.gov
- Compass Regional Service Center
 - Alex Sirotek, RSC Lead, Compass
SirotekAR@cdmsmith.com
- National Flood Insurance Program – iService Team
 - Tom Young, Regional Manager – Region I New England
tyoung@nfip-iservice.com

Department of Conservation & Recreation, Office of Water Resources

- Joy Duperault, State NFIP Coordinator and Hazard Mitigation Officer,
joy.duperault@state.ma.us

Please send all comments/protests/appeals to:

Jeffrey Burm, AECOM, One Federal Street, 8th Floor
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Please copy:

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Boston, MA 02110

Alex Sirotek, STARR, 99 High Street, 3rd Floor, Boston, MA
02110

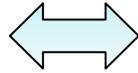
Joy Duperault, Director, Flood Hazard Management
Program, State NFIP Coordinator & Hazard Mitigation
Officer
Dept. of Conservation & Recreation, Office of Water
Resources 251 Causeway Street, 8th floor, Boston, MA
02114



Local Hazard Mitigation Plans

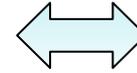


Risk MAP
Risk MAP
products and
Datasets



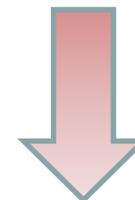
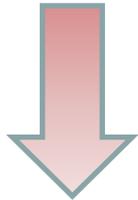
Hazard Mitigation Plan

- Uses Risk Information
- Identifies Projects/Actions
- Integrated with Other Community Plans



Other Community Plans

- Comprehensive plans
- Land Use Plans
- Capital Improvement
- Stormwater Management Plans
- Emergency Operations



Mitigation Actions/Projects

Let's Look at the Maps

Thank YOU

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