

Discovery Report Appendix J

Discovery Meeting Presentation

North Country Watersheds

HUCs 04150301-04150308

Report Number 01
March 2020



FEMA

Federal Emergency Management Agency
Department of Homeland Security
26 Federal Plaza
New York, NY



FEMA

Discovery Meeting: North Country Watersheds

September 18th – 19th, 2019



RiskMAP
Increasing Resilience Together

Agenda

- Introductions / Who's Here?
- Purpose of This Meeting
- What is Risk MAP?
- Discovery Process
- Flood Risk Products Overview
- North Country Watersheds Overview
- Base Level Engineering
- NFIP and Community Rating System
- Hazard Mitigation Planning
- Next Steps
- Discussion Session

The flyer for the North Country Watersheds Risk MAP Discovery Project features the FEMA and New York State of Opportunity logos. It includes the title "North Country Watersheds Risk MAP Discovery Project" and a call to action: "Join us in capturing a more complete picture of flood risk in your community and watershed." The text describes the FEMA Risk MAP Program, which aims to reduce flood risk by working with local communities to collect information about flooding issues and flood mitigation activities. It also mentions the upcoming Discovery Meeting, where attendees will be able to meet one-on-one with project team members to discuss local flooding issues, provide feedback on their community's existing floodplain maps, and learn more about programs and activities that may help reduce flood risk. A map of the North Country region is shown at the bottom, highlighting the areas involved in the project.

Introductions

■ FEMA Region II:

- Shudipto Rahman
Base Level Engineering Lead

■ New York State Department of Environmental Conservation (NYS DEC)

- Kelli Higgins-Roche
Project Lead
- Mary Martin
Environmental Program Specialist
- Vince Spadaro
Environmental Program Specialist

■ NYS DEC Support Team

- Phil Hipley
Project Lead, Dewberry
- Katie Zajic
GIS Professional, Dewberry
- Katy Maher
Senior Resilience Planner,
Dewberry
- Lisa Dolphin
Senior Managing Engineer,
Shumaker Engineering



3



Who's Here?

■ Tribal Nation Representatives

■ State or Federal Representatives

■ County Officials

■ Local Communities

- Elected Officials (Mayors, Administrators, Supervisors)
- Code Enforcement Officers/Engineers
- Floodplain Administrators
- EMS Coordinators
- Planners / GIS Technicians

■ Non-Governmental Organizations

■ Private sector

■ Other



4



Purpose of This Meeting

- **Explain the Risk MAP Discovery process**
- **Share your concerns about flood risk**
- **Share any additional flood data you may have:**
 - Areas of recent or proposed development
 - Areas of historical flooding
 - Overstated or understated flood hazard areas
 - Areas of possible mitigation interest
 - Risk communication/training needs
- **Share your thoughts on which FEMA flood risk products / mitigation projects you would like in your community**



5

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What is Risk MAP?

- **FEMA works with communities to develop flood risk products and flood hazard maps that are:**
 - Based on the best available data from the community and latest technologies.
- **You can use Risk MAP tools and data to:**
 - improve / implement your Hazard Mitigation Plans.
 - influence decisions about development, ordinances, and flood mitigation projects.
 - communicate with citizens about flood risk.



6

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What is Risk MAP?

- **Our common goal: to maintain the sustainability of your community by increasing its resilience from floods and other natural hazards**

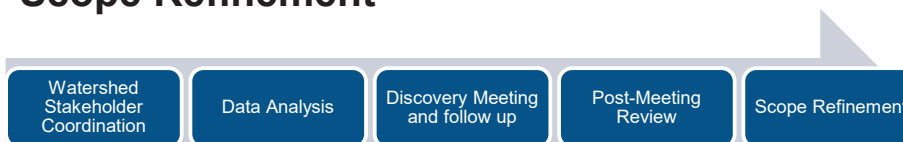


7



Discovery Process

- **FEMA and local communities/organizations “discover” and assess flood risk data**
- **Discovery Data Collection Period**
 - Stakeholder coordination and data analysis
- **Discovery Meeting**
 - Initial Discovery Maps and Report
- **Post-Meeting Review**
 - Final Discovery Maps and Reports
- **Scope Refinement**



8



Discovery Products and Results

- **Discovery Report**

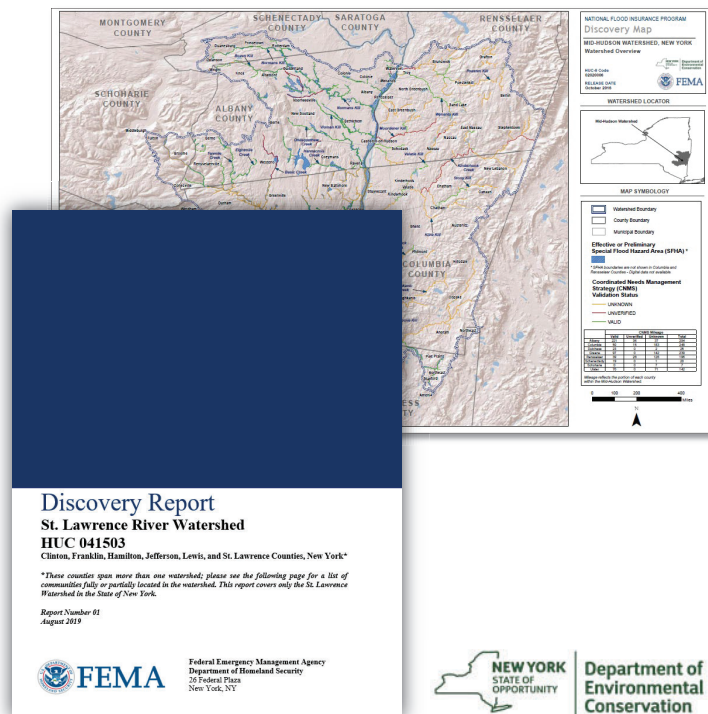
Including summary of data/needs, analysis, meetings, and action items or decisions

- **Discovery Maps**

Visual representation of data collected, including feedback from stakeholders

- **Recommended scope for future Risk MAP project**

(e.g., updated digital FIRMs)

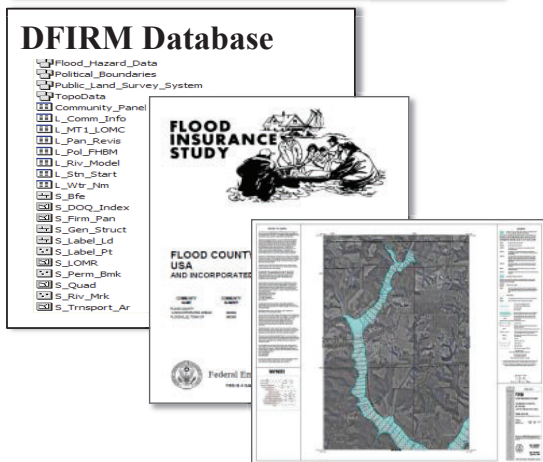


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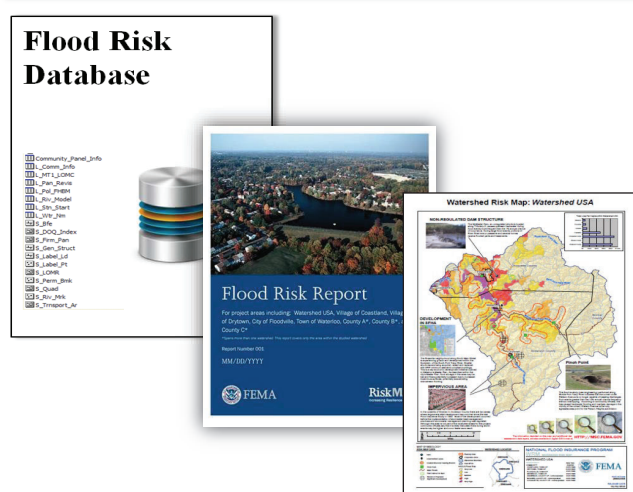
Flood Risk Products

Traditional Regulatory Products



Traditional products are regulatory and subject to statutory due-process requirements

Non-Regulatory Products (new for Risk MAP)



Risk MAP products are non-regulatory and are not subject to statutory due-process requirements



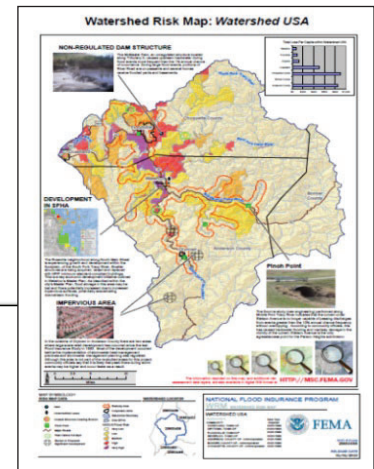
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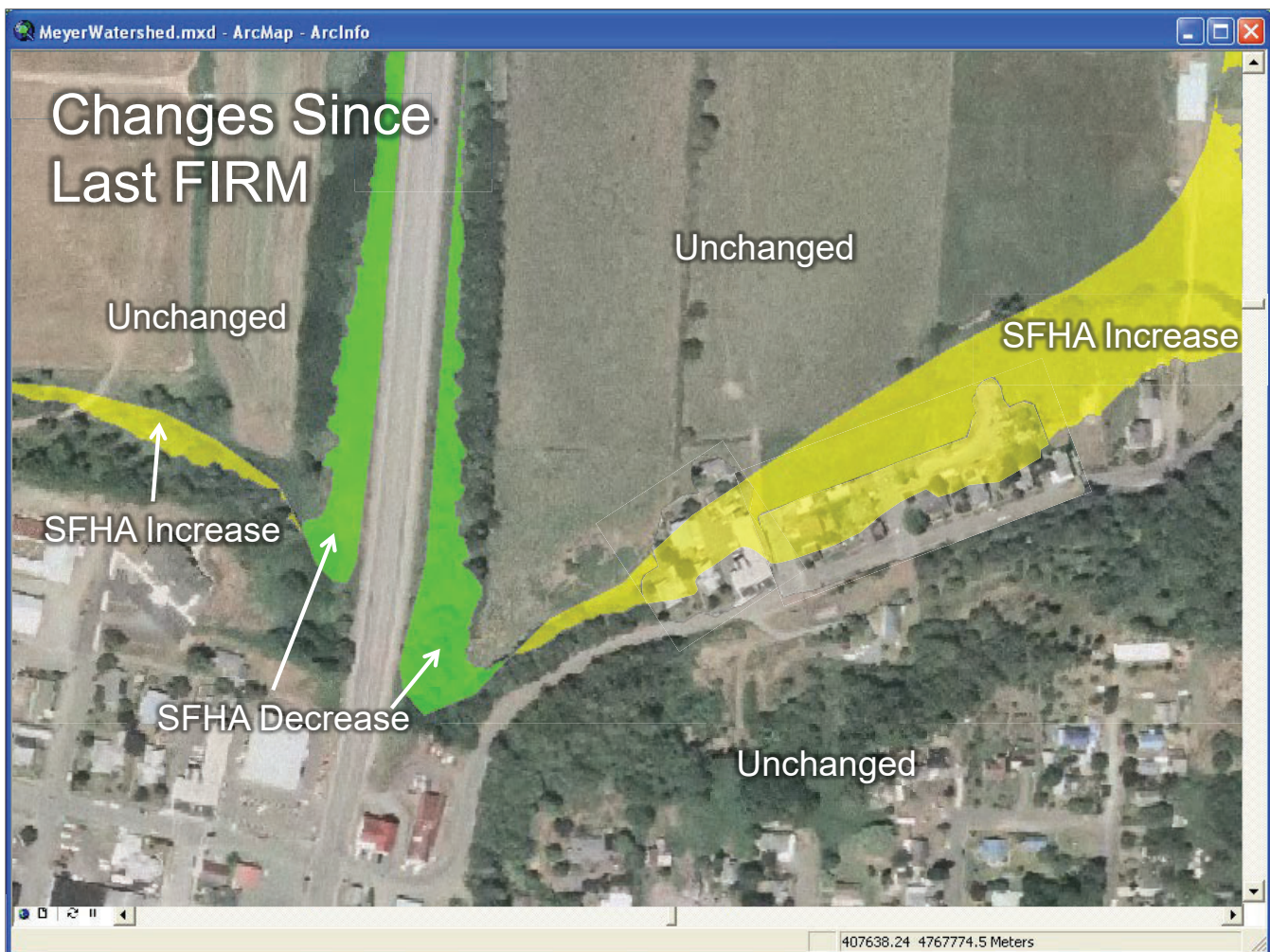
- **Flood Risk Report**
- **Flood Risk Map**
- **Flood Risk Database**

- 
- Flood Risk Report
- For study area including: Baltimore County
- Report Number 001
- 02/28/2011

- 11 Community_Panel_Info
- 11 L_Comm_Info
- 11 MT_1_LCMC
- 11 Pan_Revis
- 11 Pol_FHEM
- 11 Riv_Model
- 11 S5tn_Start
- 11 Wbr_Nm
- 2 S_Life
- 2 S_DOQ_Index
- 2 S_Firm_Pan
- 2 S_Gen_Struct
- 2 S_Label_Id
- 2 S_Label_Pt
- 2 S_LCMR
- 2 S_Perm_Bmk
- 2 S_Qued
- 2 S_Riv_Mrk
- 2 S_Transport_Ar



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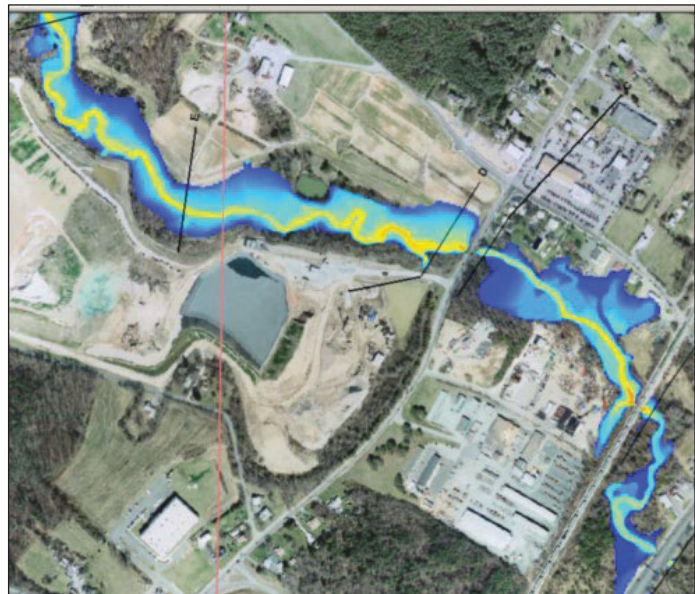
Areas of Mitigation Interest

- **Dataset that shows items that may have an impact (positive or negative) on the identified flood hazards and/or flood risks**
- **Examples include:**
 - Riverine and coastal flood control structures (e.g. dams, levees, coastal berms, etc.)
 - At risk essential facilities and emergency routes that could be overtopped
 - Stream flow constrictions (e.g. undersized culverts and bridge openings, etc.)
 - Previous assistance and claims “Hot Spots” (clusters of IA and PA claims, RL)
 - Significant land use changes
 - Significant riverine or coastal erosion
 - Locations of successful mitigation projects
- **Enhanced/optional product**



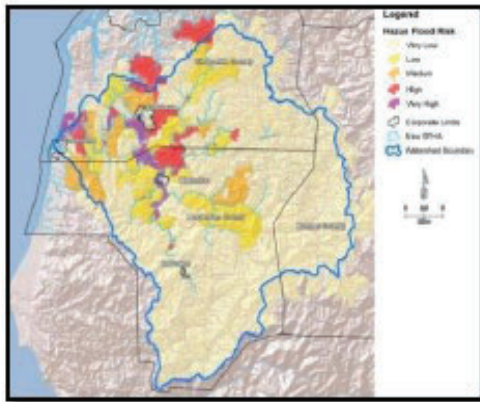
Flood Depth and Analysis Grids

- **Datasets that show depth, velocity, and probability of flood inundation as functions of event's magnitude**
- **Serves as key inputs to HAZUS Risk Assessment Analyses**
- **Increases flood risk awareness**



Flood Risk Assessment Data

- Identifies flood-prone areas and vulnerable people and property
- Provides estimate of potential damage



Flood Risk Assessment



HAZUS

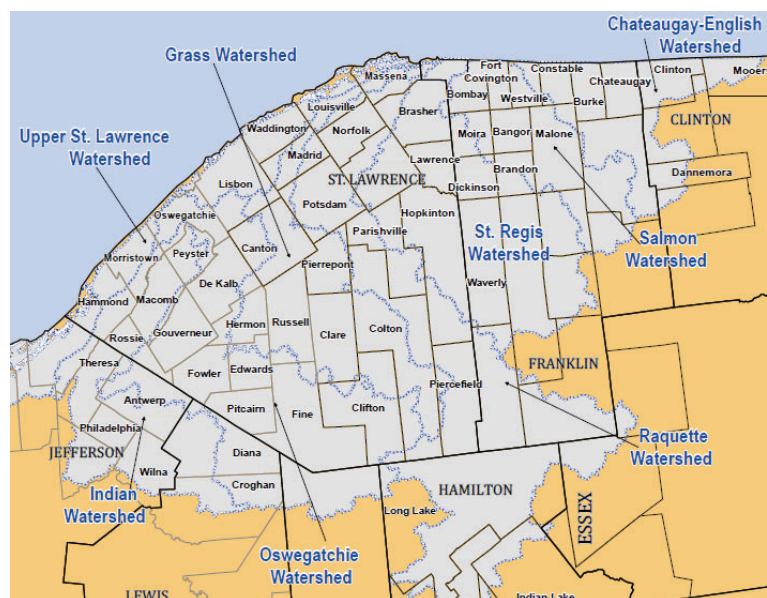


15



North Country Watersheds Discovery Project Area

- **75 communities, including Cities, Towns, and Villages**
- **6 Counties**
 - Clinton
 - Franklin
 - Hamilton
 - Jefferson
 - Lewis
 - St. Lawrence
- **1 Tribal Nation**
 - Saint Regis Mohawk Tribe

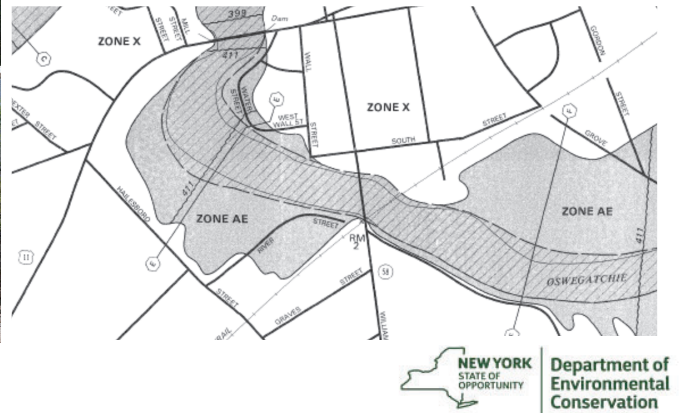


16



Why the North Country Watersheds?

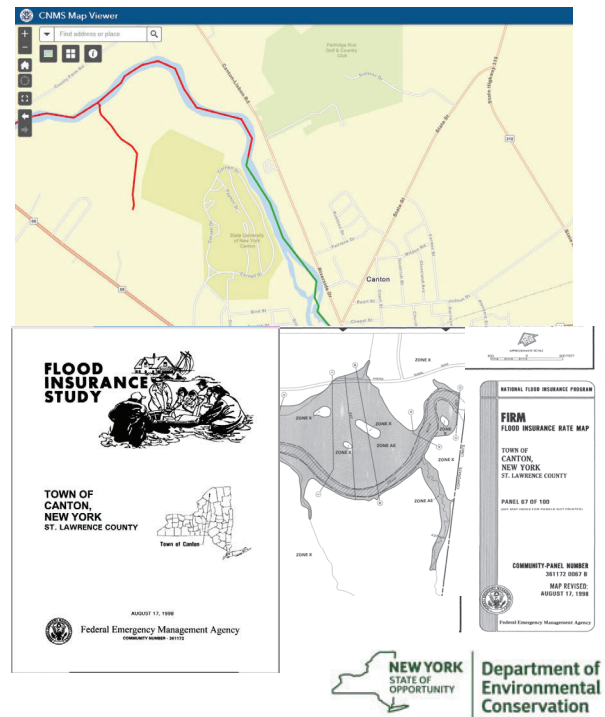
- Severe flooding in the area in 2011
- FIRMs for most communities are not yet digital
- Many flooding sources on existing digital FIRMs have not been recently restudied



Data Collection: Background Data

■ Flood Data

- FIRMs and Flood Insurance Study reports
- Community Rating System class
- Stream/lake locations
- Repetitive loss data
- Flood insurance policies and claim information
- Letters of Map Amendment
- Coordinated Needs Management Strategy information
- Presidentially Declared Disasters



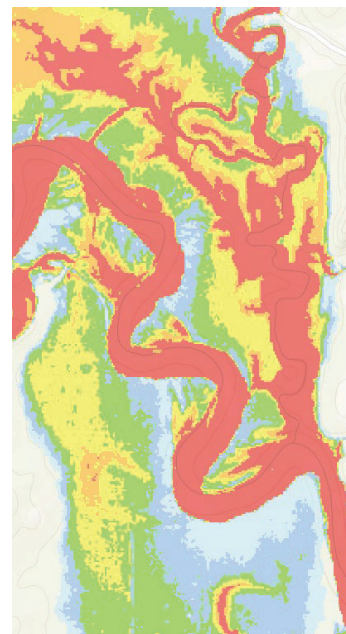
What information do we need from you?

- Historical flooding problems
- High Water Mark data
- FIRM inaccuracies
- Recent / ongoing mitigation projects / activities
- Recent or planned development activities
- Availability of GIS and other data
- Training needs



What is Base Level Engineering?

- **Base Level Engineering (BLE):**
 - Produces quality data using high-resolution ground elevation data
 - Increases public awareness by broadening and expanding risk awareness conversation within local communities
 - Leads to flood risk reduction by making assessment data available prior to regulatory FIRM updates
 - Collaborative – FEMA will work with Federal, State, Regional, and Local entities
- **BLE meets all modeling and mapping standards to rapidly update Zone A flood hazard areas**
- **Development of initial draft floodplains**

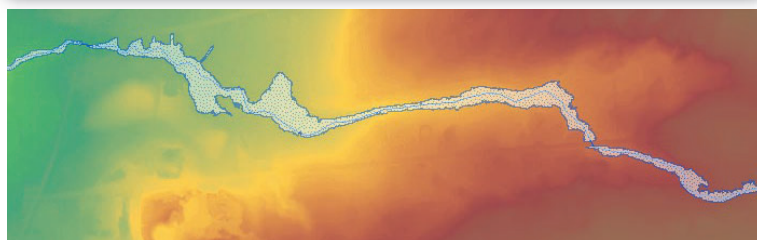
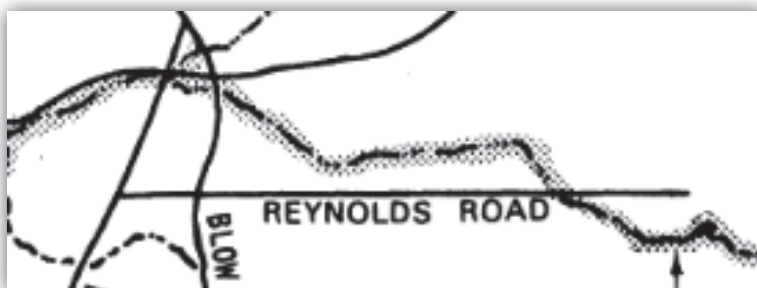
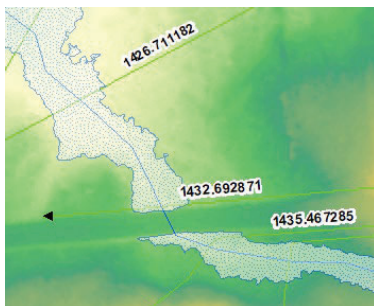


21

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What is Base Level Engineering?

- Does not replace the information shown at current or effective FIRM panels
- Used to assess the current validity of the existing flood hazard inventory and assists local communities to estimate Base Flood Elevations in Zone A areas



Town of Belmont, Franklin County, tributary located east of Chateaugay River



22

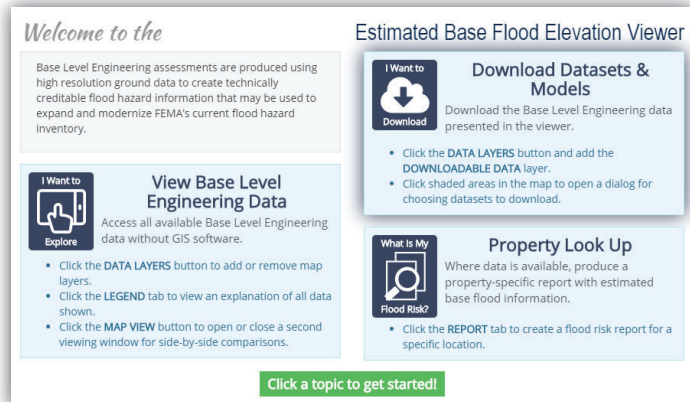
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Accessing Base Level Engineering data

- BLE results are available for use by the public on the Estimated Base Flood Elevation Viewer at:

www.infrm.us/estBFE

- Users can interact with data through the on-line portal, view data with a singular or side-by-side window.
- Users may run a site specific report to review flood risk in their vicinity at their convenience
- Users may point-click and download:
 - Engineering models
 - Floodplain Extents
 - Estimate flood depths
 - Water surface elevations



23

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Base Level Engineering: Franklin & St. Lawrence Counties

- BLE for portions of nine HUC-8 watersheds:
 - Indian (46 mi.)
 - Upper St. Lawrence (83 mi.)
 - Grass (336 mi.)
 - St. Regis (290 mi.)
 - Great Chazy-Saranac (177 mi.)
 - Chateaugay-English (60 mi.)
 - Oswegatchie (420 mi.)
 - Raquette (369 mi.)
 - Salmon (246 mi.)
- Hydrologic analysis (using USGS' Stream Stats) & Hydraulic modeling (using USACE's HEC-RAS) and floodplain mapping:
 - Over 2,000 miles
 - Peak discharges and flood profile data for the 10%, 4%, 2%, 1%, 1%+, 1%-, and 0.2% events



24

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Base Level Engineering: Franklin County

- **510.6 Miles of CNMS Scoped Stream Data**
- **Recently updated stream segments appearing on FIRMs include:**
 - St. Regis River
 - Raquette River
 - Salmon River
 - Long Pond Outlet
 - Trout River
 - Little Salmon River
 - Deer River

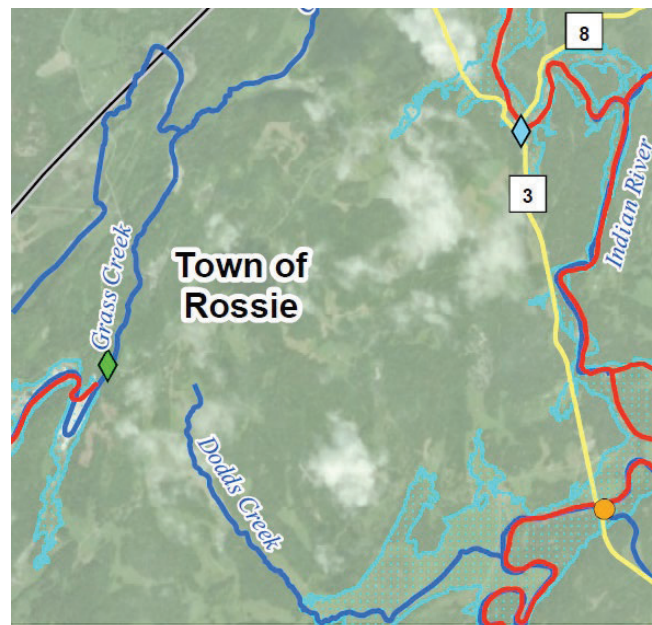


25



Base Level Engineering: St. Lawrence County

- **Over 1,500 Miles of CNMS Scoped Stream Data**
- **Recently updated stream segments appearing on FIRMs include:**
 - St. Regis River
 - Grass River
 - Oswegatchie River
 - Deer River
 - Little River
 - Raquette River
 - Saint Lawrence River
 - Dead Creek
 - Trout Brook



26



National Flood Insurance Program

- **Allows property owners and renters to purchase flood insurance at subsidized rates**
- **State and local governments agree to adopt and enforce floodplain management ordinances**
- **20,300 communities participate in the NFIP**
 - 1,490 in New York



27



National Flood Insurance Program

- **NFIP Goals**
 - Reduce loss of life and property caused by flooding
 - Reduce rising disaster relief costs caused by flooding
 - Allow federal flood insurance to be available to property owners
 - Increase importance of hazard mitigation
- **Accomplishing NFIP Goals**
 - Require new construction and substantial improvements to be flood resistant
 - Guide future development away from flood hazard areas
 - Transfer flood loss costs from taxpayers to floodplain property owners
 - Prohibit new development in designated floodways that would increase flood heights



28



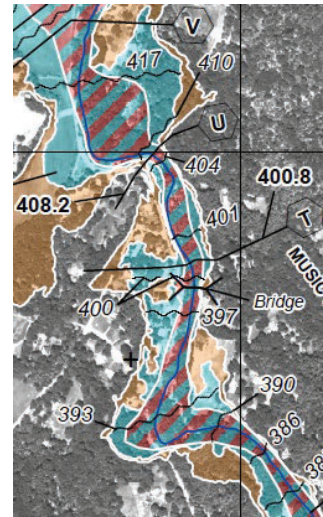
National Flood Insurance Program

■ Federal Role

- Risk identification / mapping
- Establish development / building standards
- Provide flood insurance coverage

■ State Role

- Establish development / building standards
 - State building code
 - Model local law for flood damage prevention
- Provide technical assistance to local communities/agencies
- Under contract with FEMA, evaluate and document community/agency floodplain management activities
- Follow NFIP Standards for State Projects
 - 6 NYCRR 502



29



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National Flood Insurance Program

■ Local Role

- Adopt local floodplain management laws
- Issue or deny development/building permits
- Inspect development
- Maintain records



■ Overview of Local Roles and Responsibilities

- Understand regulations
- Review permit applications
- Determine compliance
- Coordinate permit reviews
- Take enforcement action
- Interact in appeals and variances
- Collect fees
- Investigate complaints
- Maintain and update administrative forms
- Coordinate map appeals and revisions
- Maintain floodplain maps and flood data
- Disseminate floodplain management information



30



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Community Rating System (CRS)

- Flood insurance premiums discounted to reward community actions that reduce flood losses and promote the awareness of flood insurance
- Class rating system from 1 to 10
- Each Class improvement results in additional 5% discount

How much discount property owners in your community can get

Rate Class	Discount for SFHA*	Discount for Non-SFHA**	Credit Points Required
1	45%	10%	4,500 +
2	40%	10%	4,000–4,499
3	35%	10%	3,500–3,999
4	30%	10%	3,000–3,499
5	25%	10%	2,500–2,999
6	20%	10%	2,000–2,499
7	15%	5%	1,500–1,999
8	10%	5%	1,000–1,499
9	5%	5%	500–999
10	0	0	0–499

* Special Flood Hazard Area



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31

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Community Rating System (CRS)

- Credits awarded for activities implemented at the state level
- 19 creditable activities, organized under four categories:
 - Public Information
 - Mapping and Regulations
 - Flood Damage Reduction
 - Warning and Response
- Information on small communities in the CRS is available at:
<https://www.fema.gov/media-library/assets/documents/168876>



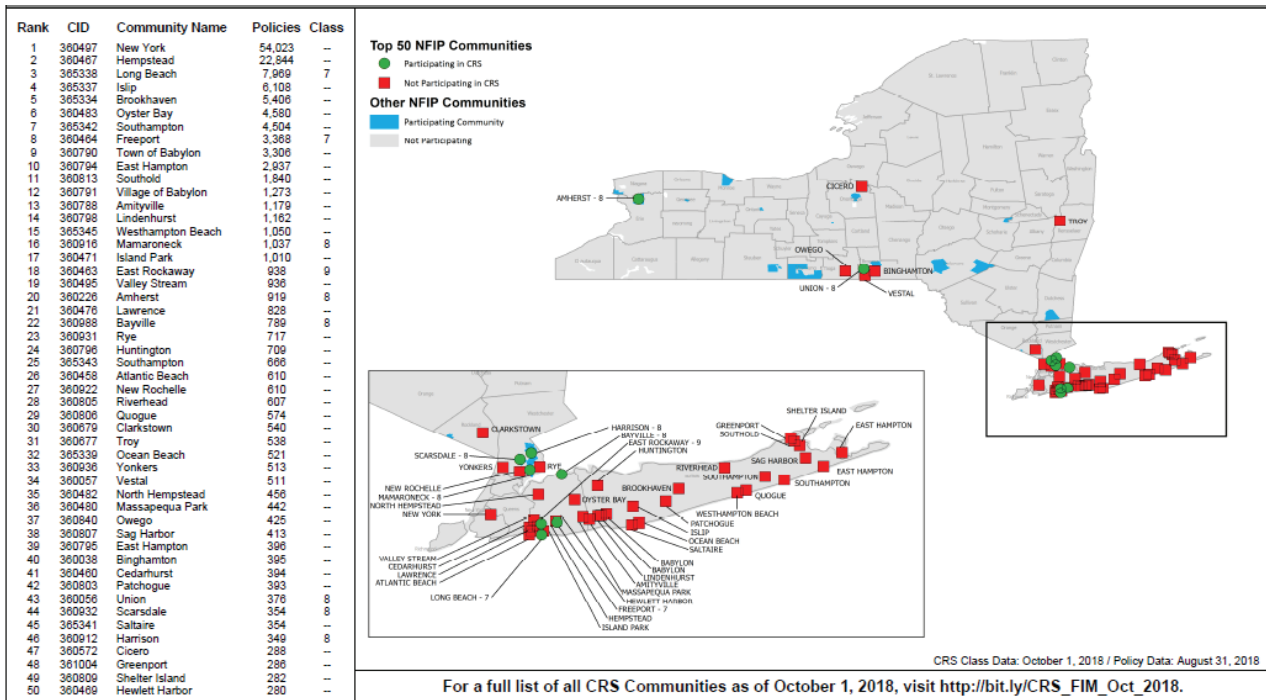
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32

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Community Rating System (CRS)



33



Recommended Higher Standards

- Go beyond 2 feet of freeboard
- Restrictions on hazardous material storage
- Regulated high risk land uses (e.g. manufactured homes/critical infrastructure)
- Setbacks/ Buffers
- Conservation/ open space area
- Cumulative Substantial Damage/ Substantial Improvement
- Lower threshold for Substantial Damage
- Subdivision design triggering flood study
- Prohibitions
 - SFHA development
 - Manufactured homes
 - Fill

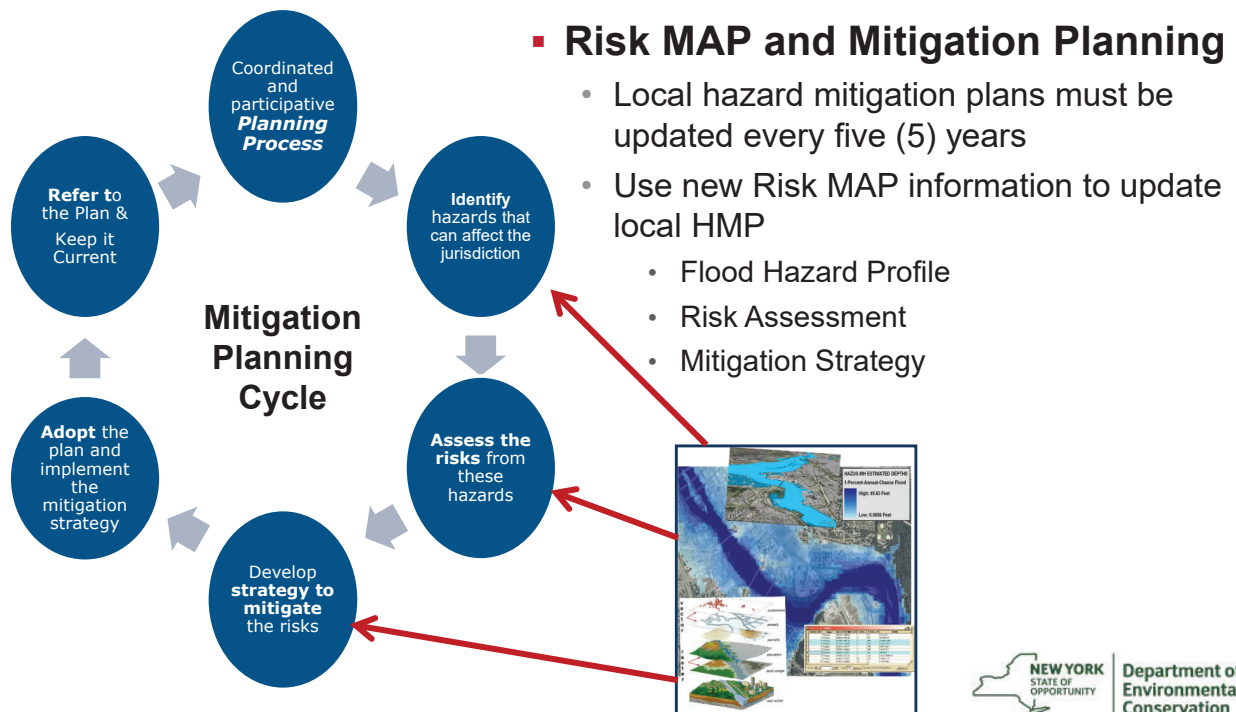
Communities do not need to join CRS to adopt higher standards



34



Hazard Mitigation Planning



Categories of Flood Mitigation Activities



Possible Mitigation Activities

Mitigation should be part of overall hazard mitigation plan

- 2 foot of freeboard for new structures.
- Cumulative substantial improvement clause.
- List of publicly owned buildings that have flood risk.
- Acquisition of flood prone structures.
- County GIS system.
- Update weather tracking equipment.
- Stream bank stabilization projects.
- Identify sanitary sewer mains vulnerable to erosion from flood.

- Adopt a wellhead protection ordinance.
- Vulnerability assessment of water and wastewater infrastructure.
- Elevate, move and acquire flood damaged structures.
- Identify vulnerable critical facilities.
- Implement mitigation measures for repetitive loss properties.
- Require elevation of new structures and substantially improved structures.
- Natural stream restoration.

Mitigation Grant Programs (FEMA)

■ Hazard Mitigation Grant Program (HMGP)

Available after a major disaster declaration - the amount of funding is 15% of the total federal assistance provided by FEMA for disaster recovery under the major disaster declaration.

■ Pre-Disaster Mitigation (PDM)

Nationally competitive grant program that funds cost effective, comprehensive mitigation activities that reduce injuries, loss of life, and damage to property.

■ Flood Mitigation Assistance (FMA)

Provides funding to assist States and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insured under the NFIP.

Mitigation Grant and Loan Programs

- **NYS OEM Manages FEMA Hazard Mitigation Grant Programs**
 - <https://www.fema.gov/hazard-mitigation-grant-program>
- **NYS DEC: Stream Restoration and Water Quality Improvement Grants**
 - <https://www.dec.ny.gov/pubs/4774.html>
- **NYS Office of Community Renewal**
 - <https://hcr.ny.gov/funding-opportunities>
- **NYS Department of State**
 - <https://www.dos.ny.gov/grants.html>
- **NYS Environmental Facilities Corporation**
 - <https://www.efc.ny.gov/grant-programs>



39



Mitigation Grant and Loan Programs

- **NYS Energy Research and Development Authority**
 - <https://www.nyserda.ny.gov/>
- **NYS Department of State Office of Communities and Waterfronts**
 - <https://www.dos.ny.gov/opd/programs/WFRevitalization/wfrPartners.html>
- **U.S. Army Corps of Engineers**
 - <https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/Frequently-Asked-Questions/>
- **HUD**
 - https://www.hud.gov/program_offices/spm/gmomgmt/grantsinfo
- **NRCS**
 - <https://www.usda.gov/topics/farming/grants-and-loans>



40



Next Steps

- **Local communities / organizations provide their input**
- **NYS DEC will:**
 - Finalize Discovery Maps and Discovery Reports and distribute to local communities and other stakeholders
 - Update FEMA systems (CNMS, National Digital Elevation/Orthophotography Programs, etc.)
 - Prepare recommended scope of work for a future Risk MAP project based on prioritized needs



41



Contact Information

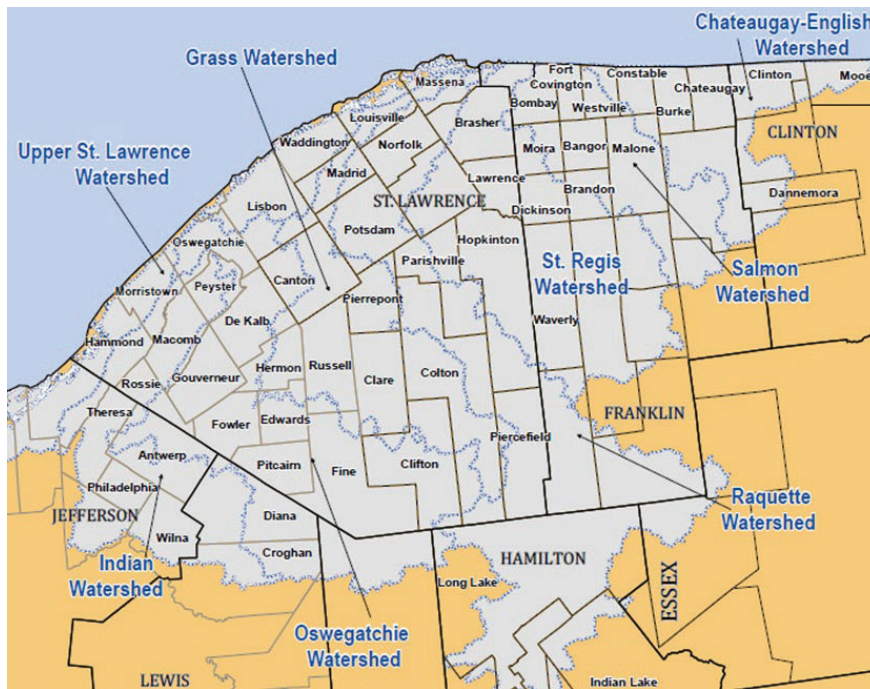
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 - Katy Maher,
kmaher@dewberry.com
 - Lisa Dolphin,
ldolphin@shumakerengineering.com



42



Questions?



43

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Discussion Session

We want to hear from you about:

- Historical flooding problems
- FIRM inaccuracies/needed updates
- Recent/ongoing mitigation projects/activities
- Recent or planned development activities
- Availability of GIS and other data
- Training needs
- Other flood-related concerns or issues



44

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