Discovery Report Appendix E

Base Level Engineering Letters
North Country Watersheds
HUCs 04150301-04150308 and 02010006

Report Number 01
March 2020

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

New York State Department of
Environmental Conservation
625 Broadway
Albany, New York 12233

U.S. Department of Homeland Security
FEMA Region II
26 Federal Plaza, Room 1337
New York, New York 10278

July 23, 2019

To: Mayors, Supervisors, and Floodplain Administrators for Franklin County:

Town of Bellmont	Town of Franklin	Town of Westville
Town of Bombay	Town of Harrietstown	Village of Brushton
Town of Burke	Town of Malone	Village of Malone
Town of Dickinson	Town of Moira	Village of Tupper Lake
Town of Fort Covington	Town of Waverly	

Re: 30 Day Engineering Models Notification – Franklin County Communities

Dear Franklin County Community Officials:

This letter is to notify you of the engineering data models being used in the Federal Emergency Management Agency's (FEMA) ongoing flood risk project in Franklin County, New York. FEMA's goal is to offer useful, credible data, and a fair process to help you make informed decisions to continue building a safer and stronger community.

These engineering data models will form the basis for the proposed Special Flood Hazard Areas (SFHAs) on future Flood Insurance Rate Maps (FIRMs) for your communities. SFHAs are areas subject to inundation by the 1-percent-annual-chance flood (also called the base or regulatory flood). Over time, water flow and drainage patterns in your area may have changed significantly due to erosion, land use, and natural events. Given these factors, the likelihood of flooding in certain areas may have increased or decreased over time, and the SFHA boundaries and designations may change.

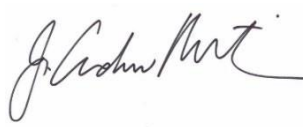
Upon receiving this notification, your community will have 30 days to talk with FEMA Regional Office staff (identified in the last paragraph of this letter) about the models selected for the project. Your community will have additional opportunities to comment and provide feedback on the draft flood hazard information throughout the project, and a formal appeal process will be available to help resolve any remaining questions before the flood hazard information becomes effective for regulatory purposes.

Draft flood hazard information for communities in and adjacent to Franklin County will be developed by FEMA's mapping partner, NYSDEC, which will use the engineering models shown on the Engineering Models Summary Table (enclosed). The table lists the HUC8 watersheds, along with details regarding the selected models. The engineering models were selected based on a variety of factors, including the type of study performed (e.g., base or enhanced, shallow flooding, coastal, alluvial fan), the size of the flood source drainage area and the type of terrain present (e.g., flat, hilly, mountainous). The attached map exhibit, Base Level Engineering Scope Streams, displays the modeled stream reaches in the HUC8 watersheds.

FEMA wants to ensure that the most appropriate technical data are used to develop flood risk products. FEMA relies on your feedback, partnership and knowledge during this important project to determine the extent of flood risk in your communities, and in support of your efforts to reduce those risks. We look forward to working with community officials and other stakeholders to increase flood risk awareness and reduce the risk to life and property from flooding. Your initial feedback will not affect your community's ability to provide feedback or to formally appeal the flood hazard information during a future appeal period.

Please provide your comments related to the types of models selected for this project by August 19, 2019. To provide your comments or get answers to any other questions about this project, please contact the FEMA Project Monitor, Stephanie Gootman, Community Planner via email at stephanie.gootman@fema.dhs.gov or by telephone at 202-802-3137.

Sincerely,



J. Andrew Martin, CFM
Chief
Risk Analysis Branch
FEMA Region II

Enclosures: Engineering Models Summary Table
Base Level Engineering (BLE) Scope Streams Figure

cc: Floodplain Administrators
Kelli Higgins-Roche, CFM, New York State Department of Environmental Conservation
Stephanie Gootman, Community Planner, Project Monitor, FEMA Region II
Juan Nieves, Project Manager, Dewberry

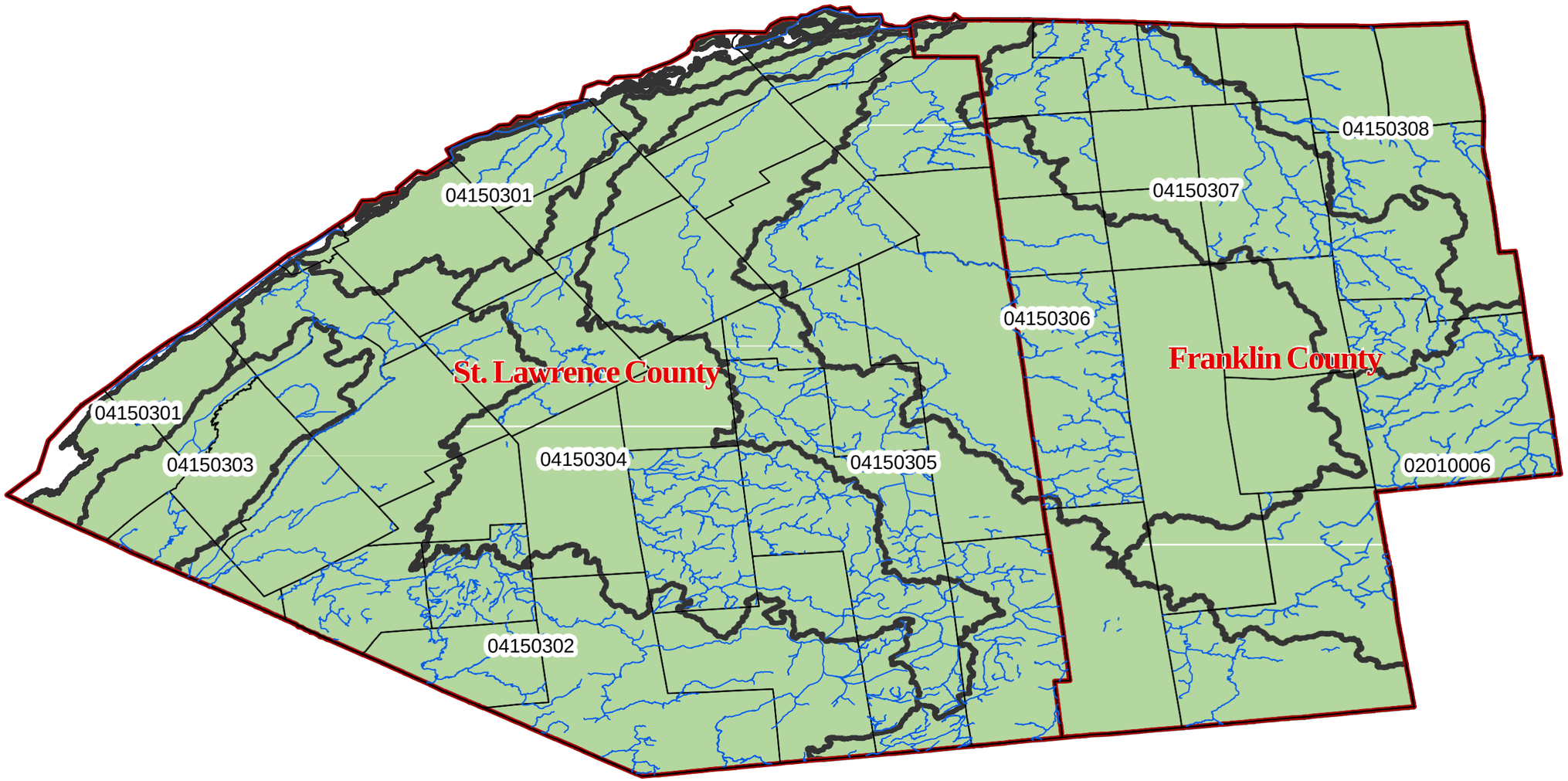
Engineering Models Summary Table

HUC8 Watershed	Communities Affected	Upstream / Downstream Limits	Total Stream Miles	Model Type - Hydrology	Model Type – Hydraulics
02010006 Great Chazy - Saranac	**Franklin County** Towns of Franklin and Harrietstown	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	177	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150305 Raquette	**Franklin County** Towns of Harrietstown and Waverly; Village of Tupper Lake	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	369	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150306 St. Regis	**Franklin County** Towns of Dickinson, Harrietstown, Malone, Moira, and Waverly	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	290	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.

Engineering Models Summary Table

HUC8 Watershed	Communities Affected	Upstream / Downstream Limits	Total Stream Miles	Model Type - Hydrology	Model Type – Hydraulics
04150307 Salmon	**Franklin County** Towns of Bellmont, Bombay, Fort Covington, Franklin, Malone, Moira, and Westville; Villages of Brushton and Malone	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	246	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150308 Chateaugay - English	**Franklin County** Towns of Bellmont, Burke, Malone, and Westville	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	60	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.

Base Level Engineering Scope Streams



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U.S. Department of Homeland Security
FEMA Region II
26 Federal Plaza, Room 1337
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July 23, 2019

To: Mayors, Supervisors, and Floodplain Administrators of St. Lawrence County:

City of Ogdensburg	Town of Gouverneur	Town of Potsdam
Town of Brasher	Town of Hopkinton	Town of Rossie
Town of Canton	Town of Lawrence	Town of Stockholm
Town of Clare	Town of Macomb	Town of Waddington
Town of Clifton	Town of Massena	Village of Canton
Town of Colton	Town of Morristown	Village of Gouverneur
Town of DeKalb	Town of Norfolk	Village of Massena
Town of DePeyster	Town of Oswegatchie	Village of Norwood
Town of Edwards	Town of Parishville	Village of Rensselaer Falls
Town of Fine	Town of Piercefield	Village of Richville
Town of Fowler	Town of Pitcairn	

Re: 30 Day Engineering Models Notification – St. Lawrence County Communities

Dear St. Lawrence County Community Officials:

This letter is to notify you of the engineering data models being used in the Federal Emergency Management Agency's (FEMA) ongoing flood risk project in St. Lawrence County, New York. FEMA's goal is to offer useful, credible data, and a fair process to help you make informed decisions to continue building a safer and stronger community.

These engineering data models will form the basis for the proposed Special Flood Hazard Areas (SFHAs) on future Flood Insurance Rate Maps (FIRMs) for your communities. SFHAs are areas subject to inundation by the 1-percent-annual-chance flood (also called the base or regulatory flood). Over time, water flow and drainage patterns in your area may have changed significantly due to erosion, land use, and natural events. Given these factors, the likelihood of flooding in certain areas may have increased or decreased over time, and the SFHA boundaries and designations may change.

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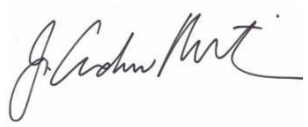
Sincerely,



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Engineering Models Summary Table

HUC8 Watershed	Communities Affected	Upstream / Downstream Limits	Total Stream Miles	Model Type - Hydrology	Model Type – Hydraulics
04150301 Upper St. Lawrence	**St. Lawrence County** City of Ogdensburg; Towns of Morristown and Waddington	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	83	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150302 Oswegatchie	**St. Lawrence County** City of Ogdensburg; Towns of Canton, Clare, Clifton, Colton, DeKalb, DePeyster, Edwards, Fine, Fowler, Gouverneur, Macomb, Oswegatchie, Pitcairn, and Rossie; Villages of Gouverneur, Rensselaer Falls, and Richville	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	420	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150303 Indian	**St. Lawrence County** Towns of DePeyster and Rossie	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	46	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.

Engineering Models Summary Table

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04150304 Grass	**St. Lawrence County** Towns of Canton, Clare, Clifton, Colton, Edwards, Massena, Potsdam, and Waddington; Village of Canton and Massena	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	336	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150305 Raquette	**St. Lawrence County** Towns of Brasher, Colton, Hopkinton, Massena, Norfolk, Norwood, Parishville, Piercefield, and Potsdam; Village of Massena	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	369	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.
04150306 St. Regis	**St. Lawrence County** Towns of Brasher, Hopkinton, Lawrence, Parishville, and Stockholm	Varies per modeled flooding source; please refer to attached exhibit for BLE-designated stream reaches.	290	**Approach: regression analysis using USGS's StreamStats application** Peak discharges computed for 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood).	**Approach: one-dimensional steady-state using USACE's HEC-RAS model** Flood elevation profiles for the 7 required flood frequencies (10%- , 4%- , 2%- , 1%- , 1%-plus, 1%-minus and 0.2%- annual chance flood) developed. New modeling along BLE-designated streams informs risk exposure.

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