

Genesee/Finger Lakes Regional Planning Council

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Third Steering Committee Meeting Model Intermunicipal Floodplain Overlay District Local Law Project

Wednesday, April 4, 2018 10 – noon

Town of Parma 1300 Hilton Parma Corners Rd. Hilton, NY 14468

Attendees

- ✓ Stevie Adams, The Nature Conservancy
- ✓ Joe Bovenzi, Genesee Transportation Council
- ✓ Scott Copey, Greece Town Planner
- ✓ John Gauthier, Greece Town Engineer
- ✓ Al Fisher, Greece Town Planning Board Chair
- ✓ John Caterino, Town of Greece
- ✓ Steve Olufsen, Monroe County Dept. of Planning & Development

- ✓ Dennis Scibetta, Parma Town Code Enforcement Officer
- Mary Binder, NYSDEC Western NY Flood Hub
- ✓ Jayme Thomann, G/FLRPC

(Via Skype)

- ✓ Mark Lowery, NYSDEC Office of Climate Change
- ✓ Amanda Lefton, The Nature Conservancy
- Kathryn Friedman, University at Buffalo

Agenda and Minutes

10:00am – Review template Floodplain Development Permit Application to complement the Site Plan Review Checklist for development in floodprone areas.

Examples shared from North Carolina Division of Emergency Management and STC Regional Planning and Development Board.

Mary Binder suggested adding "description of work" to Section II of the model floodplain development permit application on STC's website. A box for a locally defined floodplain / floodprone area should also be added. Would those local floodplains have different requirements than FEMA regulatory floodplains?

Steve Olufsen to look into what municipalities in Monroe County have the Phase II Drainage Studies (circa 1975) completed.

10:30am – Review No Adverse Impact language for consideration by the Monroe County Development Review Committee (DRC).

Example language:

The Association of State Floodplain Managers recommends No Adverse Impact floodplain management as a general guide for landowner and community actions in the watersheds and the floodplains to consider adverse impacts on other properties or communities.

No Adverse Impact floodplain management is an approach which assures that the action of one property owner or a community does not adversely impact the properties and rights of other property owners, as measured by increased flood peaks, flood stage, flood velocity, erosion, sedimentation, and costs now and costs in the future.

In 2000, the Association of State Floodplain Managers recommended a "no adverse impact" approach or goal for local government, state, and federal floodplain management to help control spiraling flood and erosion losses, new development which increases flood risks, and additional flood losses.

The Association of State Floodplain Managers promotes No Adverse Impact floodplain management. This is a "good neighbor" approach based on the premise that it's not right to transfer or worsen a flooding problem. No one has the right to use their property to harm other people. Any adverse impacts should either be avoided or mitigated. Potential impacts to consider include: higher flood stage, increased velocity, erosion and/or sediment, increased cost of public services, water quality impacts, and habitat loss.

ASFPM links for legal issues regarding No Adverse Impact floodplain management:

- Liability and NAI Floodplain Management (2004)
- NAI Legal Issues Fact Sheet (May, 2003)
- Legal Issues In Upgrading Flood Maps To Reflect Climate Change, Other Changed Conditions
- NAI and the Courts: Protecting the Property Rights of all- Updated

Suggestion to work instead with the DRC's standard stream comment as opposed to the standard floodplain comment because the floodplain comment only pertains to FEMA regulatory floodplains. NAI could have more of an upstream/downtown impact if tied to hydrology concerns.

If a community develops higher regulatory standards like No Adverse Impact, does that land use change influence flood insurance requirements by local lenders? Would lenders, in-turn, develop higher thresholds for flood insurance compliance requirements? Lenders can request their own requirements as long as they are consistent with the NFIP. Any case studies?

11:00am – Continue to review and edit the draft Intermunicipal Floodplain Overlay District local law.

New additions to Article III.

Kate Friedman suggested adding compliance and liability language and advised on the use of "shall" and "will" throughout. Add FEMA Coastal Work Maps for Lake Erie & Lake Ontario, Phase II Drainage Study, and language for historic data (e.g., benchmark/permanent monuments, windshield surveys, list of damaged homes) to mapping methods. Look into local hazard disclosure laws as an alternate approach to including historic data documentation as a mapping method for floodprone properties (see information for the CRS Coordinator's Manual about "342.b. Other disclosure requirements (ODR)" attached.) Add a definition of floodprone properties.

Joe Bovenzi shared information about the <u>Planning for Floodplain Resiliency: a community roundtable</u> on Monday, April 23 from 7-8pm at the Rochester Riverside Hotel.

Actions Items

- Steve Olufsen to look into what municipalities in Monroe County have the Phase II Drainage Studies completed and will provide the DRC's standard stream comment with his suggestions on additional language.
- Kate Friedman to provide model language for compliance and liability and research examples of local hazard disclosure laws.
- John Gauthier to provide narrative description for Phase II Drainage Study.
- Amanda Lefton to research methods for how to capture "local/non-FEMA" floodplains.
- Schedule final in-person Steering Committee meeting for possibly June at the Hilton Fire Hall, with final deliverable by August 31, 2018. Webinar to be scheduled.

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Example 342.a-1.

On their property summaries, real estate agents include a notice of flood hazard and whether flood insurance is required. When a seller contracts with a real estate agent, the latter requests map information from the community. The cost is paid by the real estate agent. The Board of Realtors[®] has provided the community with a description of this procedure.

DFH = 25

Documentation for DFH Provided by the Community

(1) At each verification visit,

(a) At least one copy of a disclosure notice from at least five real estate agencies that serve the community. If there are fewer than five agencies that serve the community, then at least one notice from each agency must be submitted.

This documentation can be copies of the notations on property summary sheets, offerto-purchase forms, MLS forms, or other media. If the MLS form is used, a photocopy of a completed MLS form must be submitted as documentation.

Seller's disclosure forms may be sufficient documentation if they clearly state that the property is or is not in the SFHA. Statements that "to the best of the seller's knowledge," or statements regarding whether the property has been flooded are not creditable. However, such statements may be eligible for credit under Section 342.b, (ODR) if they are required by law. Statements that advise the buyer to determine if the property is flood-prone are not creditable, although they may be eligible for credit under Section 342.c (REB).

Blank forms are not acceptable documentation. Copies of actual information shown to prospective buyers are required. Names may be blacked out to preserve confidentiality.

- (2) With the annual recertification,
 - (a) [Required only for the extra PPI credit] A copy of the annual report prepared by the PPI committee or by the community after meeting with real estate agents.

The report must identify how the credited element worked, how effective it was estimated to be, and what changes were recommended for improving its effectiveness. If the extra credit is based on a credited Program for Public Information, a separate submittal is not needed for this credit.

342.b. Other disclosure requirements (ODR)

The maximum credit for this element is 25 points (5 points per requirement).

The objective of the ODR credit is to provide information to people before they are committed to owning or occupying a piece of property that is subject to a flood hazard.

Credit Criteria for ODR

Credit can be requested for up to five state or local laws or ordinances that require disclosure of a property's exposure to flooding, including but not limited to

- (1) Requiring all sellers to disclose the flood hazard in those cases where a real estate agent is not involved.
- (2) Requiring real estate agents and sellers to advise potential purchasers whether "to the best of their knowledge and belief" the property has ever been flooded.
- (3) Requiring landlords to advise potential renters about the flood hazard.
- (4) Requiring final recorded subdivision plats to display the flood hazard area (see Figure 340-1).
- (5) Requiring that the flood hazard area be shown on individual lot surveys prepared for deed records, property transactions, or mortgages.
- (6) Requiring titles or deed records to show zoning or building permit conditions related to floodplain or drainage regulations, such as a notice about the substantial improvement or substantial damage requirement for floodplain properties.
- (7) Requiring signs posted in subdivisions to advise visitors of the flood hazard.
- (8) Requiring that deeds show the lot or building elevation in relation to sea level and the base or historical flood elevation.



or flood elevations on preliminary plats or permit applications are not disclosure requirements and are not credited. ODR credit is based on a legal requirement to disclose the flood hazard on a record or notice that will be seen by potential purchasers or occupants of a property.

Figure 340-1. An example of hazard disclosure on a final subdivision plat.

(9) Requiring all sellers to disclose whether the property is subject to a special flood-related hazard.

This list is not meant to be all-inclusive.

Credit Points for ODR

ODR = 5 points for each other method of disclosure required by law or ordinance

Documentation for ODR Provided by the Community

(1) At each verification visit,

(a) A copy of the law or ordinance language that requires one or more disclosure methods prior to the time of sale or rental of a property. See also Sections 231.b and 231.c on documenting regulatory language.

Example 342.b-1.

A community can receive credit for a state law that requires that, before they are recorded, all subdivision plats are to "include an engineer's or surveyor's statement as to which lots, if any, are partially or completely located in an area of special flood hazard identified pursuant to the National Flood Insurance Act of 1968." [5 points]

A community's zoning and building codes require that property records show all special requirements that have been imposed as a condition of building in a floodplain: "A record of each variance, special use permit, and conditional use permit, and all conditions and stipulations attached thereto, shall be provided to the County Recorder of Deeds to be filed with the record of the property." [5 points]

The community's application includes a photocopy of these two quoted legal requirements with "ODR" marked in the margin.

ODR = 5 + 5 = 10

342.c. <u>Real estate agents' brochure (REB)</u>

The maximum credit for this element is 12 points. There are 8 points for REB, and an additional 4 points are provided if the brochure is described in the community's Program for Public Information credited under Activity 330 (Outreach Projects).

REB credit is provided if real estate agents give a brochure to all clients that are looking to purchase a property. The brochure does not need to identify which properties are flood-prone, but it must advise the reader to check to see if a property is in a floodplain or has a history of flooding.

FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

SECTION 1: GENERAL PROVISIONS (APPLICANT to read and sign)

- 1. No work may start until a permit is issued. This includes grading.
- 2. The permit may be revoked if any false statements are made herein.
- 3. If revoked, all work must cease until permit is re-issued.
- 4. Development shall not be used or occupied until a Certificate of Compliance is issued.
- 5. The permit is invalid if no work is commenced within six months of issuance, and expires 2 years from date of issuance.
- 6. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory requirements.
- 7. Applicant hereby gives consent to the Local Floodplain Administrator or his/her representative to make reasonable inspections required to verify compliance.
- 8. I, THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

(APPLICANT'S SIGNATURE) _____ DATE _____

SECTION 2: PROPOSED DEVELOPMENT (To be completed by APPLICANT)

APPLICANT	NAME	ADDRESS	<u>TELEPHONE</u>
BUILDER			
ENGINEER			

PROJECT LOCATION:

To avoid delay in processing the application, please provide enough information to easily identify the project location. Provide the street address, lot number or legal description (attach) and, outside urban areas, the distance to the nearest intersecting road or well-known landmark. A map attached to this application, and a sketch showing the project layout would be helpful.

DESCRIPTION OF WORK (Check all applicable boxes):

A. STRUCTURAL DEVELOPMENT:

ACTIVITY

STRUCTURE TYPE

New Structure	□ Residential (1-4 Family)
□ Addition	□ Residential (More than 4 Family)
□ Alteration	□ Non-residential (Dry Floodproofing? □ Yes)
Relocation	□ Combined Use (Residential & Commercial)
\Box Demolition	\Box Manufactured Home (In a Manufactured Home Park? \Box Yes \Box No)
□ Replacement	□ Accessory Structure

B. OTHER DEVELOPMENT ACTIVITIES:

□ Fill \Box Mining □ Drilling □ Grading □ Excavation (Except for Structural Development Checked Above) □ Watercourse Alteration (Including Dredging and Channel Modifications) □ Drainage Improvements (Including Culvert Work), Stormwater Control Structures or Ponds □ Road, Street or Bridge Construction □ Subdivision (New or Expansion) □ Manufactured Home, Recreational Vehicle or Trailer Park □ Individual Water or Sewer System \Box Other (Please Specify)

C. ESTIMATED COST OF PROJECT: \$

After completing SECTION 2, APPLICANT should submit form to Local Floodplain Administrator for review.

SECTION 3: FLOODPLAIN DETERMINATION (To be completed by LOCAL FLOODPLAIN **ADMINISTRATOR)**

The proposed development is located in the Town / Village / City of on FIRM Panel No. _____, Dated _____.

- The proposed development site is reasonably safe from flooding (in Zone B, C or X). (Notify the applicant that NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED.)
- The proposed development is located partially or completely in a "special flood hazard area."

Base flood elevation at the site is:	Ft.	\Box NGVD 1929 / \Box NAVD 1988 / \Box other datum
		(describe)
	□ Unavailable	

Required flood protection level is: _____ Ft. \Box NGVD 1929 / \Box NAVD 1988 / \Box other datum (describe)

_____Ft. above the highest adjacent grade

- The proposed development is located in a regulatory floodway. FBFM or FIRM Panel No._____ Dated_____
- See Section 4 for additional instructions for development that is or may be in a flood prone area.

SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by LOCAL FLOODPLAIN ADMINISTRATOR)

The applicant must submit the documents checked below before the application can be processed:

- □ A site plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions, flood zone boundaries, and proposed development.
- □ **Development plans and specifications,** drawn to scale, including where applicable: details for anchoring structures, proposed elevation of the top of the lowest floor (including basement), types of water resistant materials used below the flood protection level, details of floodproofing of utilities located below the flood protection level, and details of flood vents for enclosures below the flood protection level. Other
- □ If flood vents for enclosures below the flood protection level do not meet the minimum design criteria specified in the Local Law for Flood Damage Prevention, provide certification by a Professional Engineer or architect specifying that the proposed design will provide for equalization of hydrostatic flood forces.
- □ Certification by a Professional Engineer or architect that proposed utilities located below the flood protection level are resistant to flood damage.
- **Elevation Certificate** for proposed building.
- □ Subdivision or other development plans. If the subdivision or development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant <u>must</u> provide base flood elevations determined using detailed methods if they are not otherwise available.
- Plans showing the watercourse location, proposed relocations, technical evaluation by a licensed professional engineer demonstrating that the conveyance capacity will be maintained, application materials for FIRM revision, and maintenance plan for the relocated portion of the watercourse.
- **Topographic information** showing existing and proposed grades and the location of all proposed fill.
- □ Top of new fill elevation _____ Ft. □ NGVD 1929 / □ NAVD 1988 / □ other datum (describe)
- □ Dry floodproofing protection level (non-residential only) _____ Ft. □ NGVD 1929 / □ NAVD 1988 / □
 other datum (describe) ______. For dry floodproofed structures, applicant must attach a FEMA Floodproofing Certificate signed by a registered engineer or architect.
- □ Certification from a Professional Engineer that the proposed activity in a **regulatory floodway** will not result in <u>any</u> increase in the height of the base flood. A copy of all data and calculations supporting this finding must also be submitted.
- □ Technical analysis by a Professional Engineer showing that the proposed development will not result in physical damage to any other property

□ Other: _____

NOTE: Any work performed prior to submittal of the above information and completion of Section 5 is at the risk of the Applicant.

SECTION 5: PERMIT DETERMINATION (To be completed by LOCAL FLOODPLAIN ADMINISTRATOR)

I have determined that the prop in conformance with provision conditions attached to and mad	posed activity: A. \Box Is B. \Box Is not is of Local Law # le part of this permit.	_, (yr) This permit is hereby issu	ed subject to the
SIGNED	, DATE	Е	
If BOX A is checked, the Loca designated fee. If BOX B is checked, the Loca Applicant may revise and resu from the Board of Appeals.	 I Floodplain Administrator i I Floodplain Administrator v bmit an application to the Lo 	may issue a Development Permit upon p will provide a written summary of defici ocal Floodplain Administrator or may re	bayment of iencies. quest a hearing
APPEALS: Appealed to Board Hearing date: Appeals Board De Conditions:	l of Appeals? □ Yes □ No cision: Approved? □ Yes □	□ No	

<u>SECTION 6: AS-BUILT ELEVATIONS AND CERTIFICATIONS</u> (To be submitted by APPLICANT before Certificate of Compliance is issued)

Certification of as-built elevations must be provided for project structures. Attach an Elevation Certificate or Floodproofing Certificate completed by an authorized professional or official and complete 1 or 2 below.

1.	Actual (as-built	t) elevation of the top of the lowest floor, including basement, is: Ft.	\Box NGVD
	1929 / 🗆 NAVI	D 1988 / other datum (describe)	
	or	Ft. above highest adjacent grade. Attach FEMA Elevation Certificate.	

 Actual (as-built) elevation of dry floodproofing protection is _____ Ft. □ NGVD 1929 / □ NAVD 1988 / □ other datum (describe) _____ Ft. □ NGVD 1929 / □
 Attach FEMA Floodproofing Certificate.

Attach any additional certifications that are required to document compliance. These may include: "no-rise" certification, certification of flood resistant design, certification of soil compaction, non-conversion agreement, etc.

SECTION 7: COMPLIANCE ACTION (To be completed by LOCAL FLOODPLAIN ADMINISTRATOR)

The LOCAL FLOODPLAIN ADMINISTRATOR will complete this section as applicable based on inspection of the project to ensure compliance with the community's local law for flood damage prevention.

INSPECTIONS:	DATE	BY	DEFICIENCIES? \Box YES \Box NO
	DATE	BY	DEFICIENCIES? \Box YES \Box NO
	DATE_	BY	$___ DEFICIENCIES? \Box YES \Box NO$

SECTION 8: CERTIFICATE OF COMPLIANCE (To be completed by LOCAL FLOODPLAIN ADMINISTRATOR)

Certificate of Compliance issued: DATE: _____ BY: _____

Model Intermunicipal Floodplain Overlay District (I-FOD) Local Law

Article I: Purpose & Intent

- 1. Flooding is the primary natural hazard in New York State, causing millions of dollars' worth of damage to homes and businesses each year.
- 2. The National Flood Insurance Program (NFIP) was created in 1968 by Congress to help people financially protect themselves from flooding. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP and enforces floodplain management regulations.
- 3. Even with thousands of communities participating in the NFIP, flood damages continue to rise.
- 4. The NFIP sets minimum requirements for new construction in a floodplain, and has no regulations for development outside the mapped floodplain. Communities can adopt higher development standards than the NFIP and prepare maps for land use planning, regulation, and other purposes using a variety of geospatial modeling methods to be used in conjunction with the flood maps that have been prepared for flood insurance rating purposes for the NFIP.
- 5. No Adverse Impact (NAI) floodplain management is an approach developed by the Association of State Floodplain Managers (ASFPM) that ensures the action of any community or property owner—public or private—does not adversely impact the property and rights of others. For local governments, NAI floodplain management represents a more effective way to tackle flood problems.
- 6. Intermunicipal cooperation in comprehensive planning and land use regulation is recognized under New York General Municipal Law §119-u. Under §119-u 4., intermunicipal agreements can be used to (e) "create an intermunicipal overlay district for the purpose of protecting, enhancing, or developing community resources that encompass two or more municipalities."
- 7. This law outlines a foundation by which a municipality can organize and coordinate with neighboring municipalities to address the effects of climate change, including storm surge, sealevel rise, and inland flooding, to avoid "downstream" adverse effects of one community on another by coordinating during the planning and development review process.

ARTICLE | ANNOTATIONS

The list above is a general set of objectives to reduce the potential and/or actual damages from an increase in frequency and severity of storm and precipitation events and flooding to infrastructure, economic assets, and natural resources.

Article II: Definitions

Floodplain, 500-year - this is the boundary of the flood that has a 0.2-percent chance of being equaled or exceeded in any given year. This area may be designated as Zone B, C, or X. X Zone relates to newer Flood Insurance Rate Maps, which show B and C Zones as X Zone. The shaded X Zone corresponds to a B Zone and the unshaded X Zone corresponds to a C Zone. It is officially termed the 0.2-percent annual chance floodplain and is outside the SFHA.

Floodplain Storage Compensation - an artificially excavated, hydraulically equivalent volume of floodplain storage sufficient to offset a reduction in floodplain storage resulting from filling or

construction within the local regulatory floodplain as determined by the administering agency. Such floodplain storage compensation shall be within the same watershed and shall be provided on the same property or at an alternate site if the administering agency so approves.

Floodprone Area - an area most prone to flooding that is delineated using ______ mapping methods. The floodplain for a localized flood problem may not be mapped as Special Flood Hazard Area on the Flood Insurance Rate Map.

Special Flood Hazard Area - is the land in the floodplain within a community subject to a one-percent or greater chance of flooding in any given year. This area may be designated as Zone A, AE, AH, AO, A1-A30, A99, V, VO, VE, or V1-V30. It is also commonly referred to as the base floodplain or 100-year floodplain.

Stream - general term for a body of flowing water. In hydrology the term is generally applied to the water flowing in a natural channel as distinct from a canal. More generally as in the term stream gaging, it is applied to the water flowing in any channel, natural or artificial. Streams in natural channels may be classified as follows:

- 1. Perennial. One which flows continuously.
- 2. Intermittent or seasonal. One which flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow in mountainous areas.
- 3. Ephemeral. One that flows only in direct response to precipitation, and whose channel is at all times above the water table.

Substantial Damage - damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement - any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- 1. Before the improvement or repair is started; or
- 2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include:

- 1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions;
- 2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

Wetland - an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation, and is regulated by federal, state or local laws.

ARTICLE II ANNOTATIONS

There are several terms and acronyms used throughout this model local law that need to be clarified. Those listed above are summaries of technical terms that are officially defined in the NFIP regulations and are suggested for adoption or modification in a community's floodplain management ordinance.

Article III: Applicability / District Standards

- 1. Delineation of local floodplain boundaries.
 - A. Geospatial referenced data.
 - i. Fathom's United States Flood Hazard Maps.
 - Fathom has generated flood hazard maps using a proprietary modeling method. This high-resolution model simulates floods on all rivers across the entire continental United States. It uses a 30m digital elevation model to produce river networks, channel geometry, and land surface. It then uses rainfall data, hydrography data, and satellite imagery to model different frequency flood events. www.fathom.global
 - New York Natural Heritage Program's (NHP) Variable Width Riparian Buffers. Variable width riparian buffers were generated for NHP's Statewide Riparian Opportunity Assessment to support the identification and prioritization of riparian sites for restoration or protection. Riparian zones may include stream banks, floodplain, and wetlands as well as sub-irrigated sites forming a transitional zone between upland and aquatic habitat. These zones provide flood abatement and water quality improvement services. The model uses inputs that represent two primary factors that all riparian ecotones are dependent on: the watercourse and its associated floodplain. Fixed width buffers only consider the watercourse and ignore the critical surrounding geomorphology, associated vegetation, and soil characteristics. The model is an ArcGIS compatible tool that calculates the riparian boundary based on digital elevation data (10-meter), a streams layer (high resolution NHD), a wetland layer (NWI), and an estimate of the 50-year flood height for the HUC12. www.nynhp.org/treesfortribsny
 - iii. The Nature Conservancy's (TNC) Eco-Hydrologically Active (EHAs) Areas. To help prioritize areas for restoration or protection in the Chesapeake Bay Watershed, TNC developed a tool to identify areas that are ecohydrologically active (EHAs), places where groundwater is close enough to the surface that vegetation can interact with it. This interaction can lead to open water, headwater wetlands, floodplains, and riparian buffers—areas that could be providing flood abatement and water quality benefits. The tool identifies these areas based on the geomorphology of the stream corridor and the surrounding landscape. First, it uses a high resolution digital elevation model (LiDAR) to delineate land within 1.5 meters elevation of a stream. It then determines the relative slope of lands within this area. The slope of the land surface across these wetter areas indicates whether an area is likely inundated, driven by surface water input, saturated (but not flooded) and likely driven by groundwater inputs, or incised. www.dnrec.delaware.gov/Admin/DelawareWetlands/Documents/DE%20Wetlands
 - iv. Phase II Drainage Study (description needed)

- B. Locational reference based on geographic information.
 - i. New York State Flood Risk Management Guidance (SFRMG). To meet its obligation to develop guidance for the implementation of CRRA, the Department of Environmental Conservation (DEC) is developing a new document. The SFRMG is intended to inform state agencies as they develop program-specific guidance to require that applicants demonstrate consideration of sea-level rise, storm surge, and flooding, as permitted by program-authorizing statutes and operating regulations. The SFRMG incorporates possible future conditions, including the greater risks of coastal flooding presented by sea-level rise and enhanced storm surge, and of inland flooding expected to result from increasingly frequent extreme-precipitation events.
 - a. Use the vertical flood elevation and corresponding horizontal floodplain that result for adding two feet (three feet for critical facilities) of freeboard to the BFE and extend this level to its intersection with the ground.
 - b. Use the vertical flood elevation and corresponding horizontal floodplain associated with the 0.2-percent annual chance flood.
 - c. Use the vertical flood elevation and corresponding horizontal floodplain determined by a climate-informed science approach in which adequate, actionable science is available.
 - ii. Stream protection setback.
 - a. U.S. Geological Survey topographical maps shall be used to classify impermanent and permanent streams. Impermanent, also known as "seasonal," streams require a minimum of 25 feet of setback on each side of the stream, extending from the stream bank toward the uplands. Permanent streams are required to have a minimum 50 feet of buffer on each side of the stream, extending from the stream bank toward the upland.
 - b. Others?

ARTICLE III ANNOTATIONS

Floodplain management ordinances are enacted by local government as a condition of NFIP participation. The NFIP has clear requirements for such ordinances, but they are minimum requirements that communities are free to enhance or exceed with stricter requirements of their own. Communities are free to undertake their own mapping and to use such techniques as future-conditions mapping to develop a more inclusive overlay district for the purpose. Select options are listed above for defining local floodplains.

2. Official maps.

Annotations

The legislative authority of a town, village, or city may establish an "official map" or "plan" of the municipality, showing streets, highways, and parks laid out and established by law. In addition, the official map may show drainage systems. The purpose of establishing such a map, according to the enabling statutes, is the conservation and promotion of the public health, safety, and general welfare. More specifically, Sections 277 and 278 of the Town Law, authorizing the planning board to require reservation of suitable land for a park or parks in approving subdivision plats, envision a plan whereby suitable open spaces are to be provided and to become part of the official map to insure that they are not built upon.

The statutes which delegate to municipalities the power to adopt official maps have been upheld where they did not impose so great a burden upon private land as to take it without due process of law. It has been held that an official map that affects only one-fourth of a plaintiff's property does not effect a taking without due process of the law.

A planning board must review proposed changes in the municipality's official map. For a map to be official, it must be adopted by ordinance or resolution. The ordinance or resolution that establishes a city map must require that an appropriate official or employee of the city execute and file with the clerk or register of the county or counties in which the city is situated, a certificate showing that the city has adopted an official map. The state comptroller has ruled that the filing requirement is mandatory, but has disclaimed authority to determine the effect of failure to file. When a village map is adopted, the village clerk is required to file a certificate of such adoption with the county register or clerk. A similar obligation is imposed upon a town clerk where an official map is adopted by a town. A town has not properly adopted an official map where the town clerk has failed to file with the county clerk a certificate of the map's establishment as required by Section 270 of the Town Law.

With respect to amendments of the map, the legislative body of a municipality which has established an official map has the power to change or add to such map. Changes or additions may be made so as to lay out new streets, highways, parks, or drainage systems, and they may be made as frequently as is deemed necessary for the public interest. A municipal legislature is authorized to change the official map only after notice and hearing. The notice requirements are not the same for all municipalities. A city legislature is required to publish notice of a proposed map change at least once in an official newspaper or one of general circulation, at least five days prior to the hearing. Although, the publication requirement has been omitted in Section 7-724 of the Village Law, the Town Law requires that notice of a hearing on a change in the official map must be published in a newspaper of general circulation at least 10 days prior to hearing, but no posting requirement is imposed. The several enabling statutes require that a proposed change in an official map be referred to the planning board for a report before final action is taken by the legislative authority. If the planning board does not make its report within 30 days after the referral, the legislative body is free to act upon the change without a report from the board. When a change is finally adopted by the legislative authority of a municipality, it becomes a part of the official map and has the same force and effect. Section 809 of the General Municipal Law requires that every application for a change in the official map "state the name, residence and nature and extent of the interest of any state officer or any officer or employee of such municipality or of a municipality of which such municipality is a part, in the person, partnership or association making such application, petition or request to the extent known to such applicant."

An official map may be amended by the proper filing of an approved plat. When a plat has been approved and properly filed, subject to court review, the streets, highways, and parks shown on such plat become a part of the official map of the city, town, or village where the platted land is situated. However, the streets shown on an approved and filed plat remain private streets until they are formally dedicated and accepted by the municipality, or until the municipality has condemned the land for public use as a street. In fact, the enabling acts specifically provide that the owner of the platted land may add, as part of the plat, a notation to the effect that no offer of dedication of streets, highways, or parks shown on the plat is intended.

Article IV: Actions for Referral

1. Regulated Activities

A. Require that all improvements or repairs are counted cumulatively toward the substantial improvement requirement. *This requirement, known as cumulative substantial improvement (CSI), ensures that owners do not evade flood protection measures by making many small improvements that eventually add up to a major or substantial improvement. By adopting the definition of "Repetitive Loss" and modifying the "Substantial Damage" definition, communities can ensure that the total value of all improvements permitted over the years does not exceed 50% of the value of the structure. There are two options for ordinance language that is consistent with the definition of "repetitive loss structure" under the NFIP.*

Option 1: i. Adopt the following definition: "Repetitive loss" means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

ii. And modify the "substantial improvement" definition as follows: "Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have incurred "repetitive loss" or "substantial damage," regardless of the actual repair work performed.

Option 2: i. Modify the "substantial damage" definition as follows: "Substantial Damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damage condition would equal or exceed 50% of the market value of the structure before the damage occurred. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

B. Add a definition for "critical facilities" and require that, to the extent possible, critical facilities be located outside of the SFHA, preferably outside of the 0.2-percent chance floodplain. *This regulatory language addresses the protection of critical facilities that can include, but are not limited to*:

- *i.* Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials;
- *ii.* Hospitals, nursing homes, and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood;
- *iii.* Police stations, fire stations, vehicle and equipment storage facilities, and emergency operations centers that are needed for flood response activities before, during, and after a flood; and
- iv. Public and private utility facilities that are vital to maintaining or restoring normal services to flooded areas before, during, and after a flood.

A community can prohibit new critical facilities from both the 1-percent chance (e.g., 100-year) and the 0.2-percent chance (e.g., 500-year) floodplains by adding a definition and provisions for enforcement.

- C. Maintaining floodplain storage by prohibiting fill or by requiring compensatory storage. Although floodway regulations preserve flood conveyance, they allow the flood fringe to be filled in. The resulting loss of storage can have a significant effect on downstream flood heights, especially in flat areas. Floodplain storage capacity can be preserved in two ways. The first is to simply prohibit fill, the major cause for loss of storage. Prohibiting fill will also prevent most floodplain development and will help preserve the natural and beneficial functions of the floodplain. The other method is to require compensatory storage, e.g., the developer must compensate for each cubic foot of fill, building, or other item that is displacing flood water. Generally, this is done by removing an equal volume of fill from the lot, usually at the same elevation to maintain the same hydraulic conditions.
- D. Eliminate walk out basements adjacent to streams and wetlands.

ARTICLE IV ANNOTATIONS

This section has been customized specifically for the Towns of Greece and Parma and Village of Hilton, Monroe County. The three municipalities participated on the Steering Committee for the Model Intermunicipal Floodplain Overlay District Local Law Project as an implementation item of their Flood Smart Action Plan (September 2016). Municipal representatives were asked to vote in a Minimum Standards Survey on what development standards are most important to be enforced across the jurisdictions in managing the upstream-downstream connection of communities. Out of sixteen choices developed from various sources such as CRS Credit for Higher Regulatory Standards, these four standards were most popular.

Article V: Referral Process

1. Applications. All materials required by and submitted to the local board as an application. All referrals must include Cover Sheet, which should be filled out by the municipality.

2. Authorization. Referrals are assigned to Planning Board Chair and/or Code Enforcement Officer.

3. Time limits. The municipality is allowed the following timeframes to review and reply after receipt of a full statement:

- A. minimum of thirty (30) days, and
- B. maximum of up to two (2) days prior to a regularly scheduled meeting during which the board will be taking action (e.g., voting) on the project.

4. Factors for consideration. Review letters can include advisory comments, which are meant to provide helpful insights or suggestions:

- A. Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainages,
- B. Potential downstream impact/effects of project,
- C. Flow paths, and
- D. Adequacy and impact of structures, roadways and landscaping in areas with susceptibility to ponding, flooding, and/or erosion.

ARTICLE V ANNOTATIONS

This section references General Municipal Law §239. New York General Municipal Law (GML) requires that certain types of municipal planning, zoning, and subdivision projects be referred to County Planning for review prior to local action being taken. The requirement seeks to promote coordination of land use decision-making and to enhance consideration of potential intermunicipal and county-wide impacts. There are three sections of GML §239 which govern this process: §239-I describes the purpose for county review; §239-m describes planning, zoning and development review referral; and §239-n describes the referral of subdivision applications.

Article VI: Compliance and Liability

- 1. No land shall hereafter be developed and no structure shall be located, relocated, constructed, reconstructed, enlarged or structurally altered in the floodprone area except in full compliance with the terms and provisions of this Law and any other applicable ordinances and regulations that may apply to the FOD.
- 2. The degree of flood protection sought by the provisions of this Law is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study, but does not imply total flood protection. This Law does not imply that districts outside the FOD or land uses permitted within such district will be free from flooding or flood damages.
- 3. This Law shall not create liability on the part of the Municipalities or any officer or employee thereof for any flood damages that result from reliance on this Law or any administrative decision lawfully made thereunder.

Article VII: Severability and Effective Date

1. Severability

If the provisions of any article, section, subsection, paragraph, subdivision or clause of this local law shall be judged invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the remainder of any article, section, subsection, paragraph, subdivision or clause of this local law.

2. Effective Date

This Local Law shall be effective upon filing with the Office of the Secretary of State. Approved by:

Date

Article VII: Appeals

Variances to the requirements of this local law shall be handled by the Board of Zoning Appeals as defined under ______.