

# State officials to present mitigation plans

Meeting set for Sept. 27 at 6 p.m. at Five Towns Community Center in Lawrence

By TYLER MARKO

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The devastation wrought by Hurricanes Harvey and Irma most likely stirs memories of what occurred nearly five years ago, when Hurricane Sandy swept across the South Shore. For some that nightmare constantly recurs, as even a light rain has the potential to flood roads, submerge cars and ruin basements in parts of the Five Towns.

These residents will have the opportunity to voice their opinions on the Community Reconstruction Program projects proposed by the Governor's Office of Storm Recovery to hopefully mitigate flooding in the area, and prepare for the next major storm. Officials from the storm recovery office and Nassau County's Department of Public Works will hold an open-house style meeting at the Five Towns Community Center on Sept. 27 at 6 p.m. The center is at 270 Lawrence Ave. in Lawrence.

According to the DPW, all recommendations will be shared with public at this meeting on display boards featuring schematics and flood reduction details for each community. Officials will also discuss and record any feedback from residents.

Plans were already shared with Lawrence Mayor Alex Edelman, DPW work-



Courtesy Mira Konigsberg

**FLOODING OCCURS REPEATEDLY** in certain areas of Lawrence. Above, a resident drive through water at the intersection of Medlow Lane and Marbridge Road.

ers and a representative from State Sen. Todd Kaminsky's office on Sept. 13. This meeting allowed community officials to offer their input so state officials could reevaluate before presenting the plans publicly.

Due to the size of the Five Towns, state officials have been conducting evaluations on the area for several months. The

study's goal had been, "To address areas that have been identified as historically vulnerable to localized flooding due to tidal backflow, limited drainage capacity/overflow, topographic low points or a combination thereof," storm recovery officials stated in a media release.

"Numerous drainage problem or focus areas were identified in the CRP as well

as through meetings with community officials which warranted additional study before potential improvements could be proposed and implemented," said Catie Marshall, a spokeswoman for the storm recovery office.

Using this information, the state decided on several different strategies designed to mitigate the stormwater issue, tailored to meet each community's specific needs. "Stormwater drainage system improvements include: backflow prevention, increased pipe diameter, correcting pipe pitch and elevation," said DPW spokeswoman Mary Studdert.

Based on figures provided by the state, \$27 million was allotted for all Five Towns Community Restoration Projects, of which \$19 million is dedicated to alleviating flooding. At a meeting between residents and elected officials on Aug. 28 at the Lawrence Yacht & Country Club, Kaminsky said he wasn't sure if \$19 million would be enough to fix everything. Most likely it will not be, as state officials said that some improvements will have to be done by county, town and village governments.

"It is my understanding that they have been selecting from the set of approved projects for cost analysis, environmental impact and effectiveness," said Bob Block, co-chair of the Five Towns Committee.



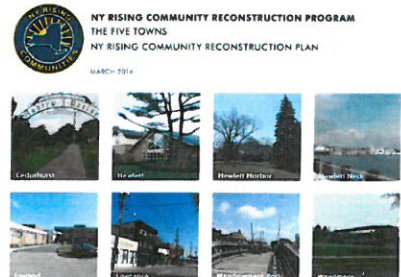


Governor's Office of  
Storm Recovery

## Nassau County Five Towns Drainage Study

### PURPOSE AND SCOPE OF DRAINAGE STUDY

Municipal drainage improvement projects originated as a concept in the 2014 Five Towns Community Reconstruction Plan (CRP) under the Governor's Office of Storm Recovery's (GOSR) New York Rising Program to address areas that have been identified as historically vulnerable to localized flooding due to tidal back-flow, limited drainage capacity/overflow, topographic low points or a combination thereof. Numerous drainage problem or focus areas were identified in the CRP as well as through meetings with community officials which warranted additional study before potential improvements could be proposed and implemented.



**The primary purpose of the Five Towns Drainage Study was to first, document existing municipal stormwater drainage conditions and then, to identify potential drainage improvements or flood mitigation projects.**

Major components of the existing municipal storm drainage systems were evaluated and potential improvements were developed. The systems were assembled using current Geographic Information System (GIS) data, existing hardcopy records, historical flooding information, and field investigations. Problem areas were identified from the CRP, by working-group and one-on-one meetings with local municipal engineers and Nassau County Department of Public Works (DPW) staff over the past 18 months, and through network analyses. Problem areas were segregated by drainage networks for analysis, and plans proposed which would help mitigate recurring flooding issues.

### FIVE TOWNS DRAINAGE MODELING

Twelve problem area drainage networks were modeled in Bentley® SewerGEMS

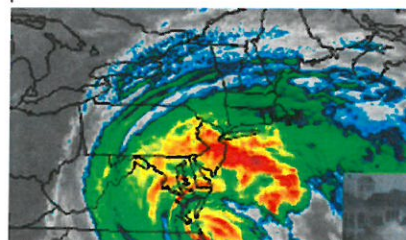
***Modeled Storm Events (24-hour events) focused on larger, recurring events and included:***

- 1-inch Rainfall
- 2-Inch Rainfall
- 1-year Rainfall (2.8 inches)
- 10-year Rainfall (5.1 inches)

### ***Recent Significant Rainfall Events:***

Between 2007 and 2017 there were 54 rainfall events greater than 1 inch. They included:

- 40 events of 1" to 2" of rainfall,
- 11 events of 2" to 3" of rainfall, and
- 2 events since 2013 of greater than 3"
- 1 event, Hurricane Irene in 2011, dropped 7.8"





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## Nassau County Five Towns Drainage Study

### IMPROVEMENTS CONSIDERED

#### Backflow Prevention



Install Tideflex® or Checkmate®  
valves

#### Pipe Improvements



Increase pipe size, add additional  
pipes, repair drainage network

#### Storage



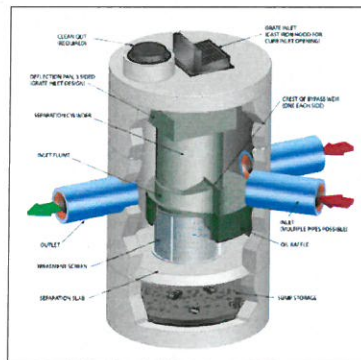
Inline underground storage,  
detention

#### Pump Stations



Construct Stormwater Discharge  
Stations

#### Water Quality Improvements



Continuous Deflection  
Separation (CDS)

#### Green Infrastructure



Bioswales, rain gardens,  
infiltration

\*ALL PHOTOS ARE ILLUSTRATIVE

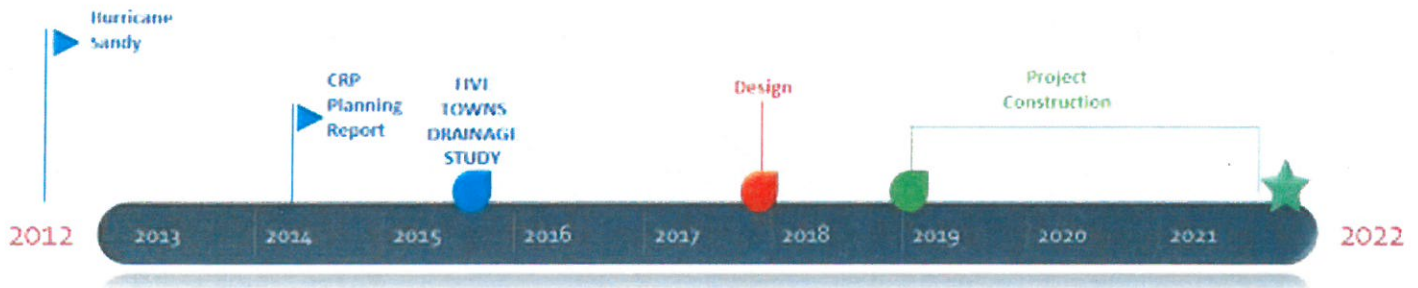




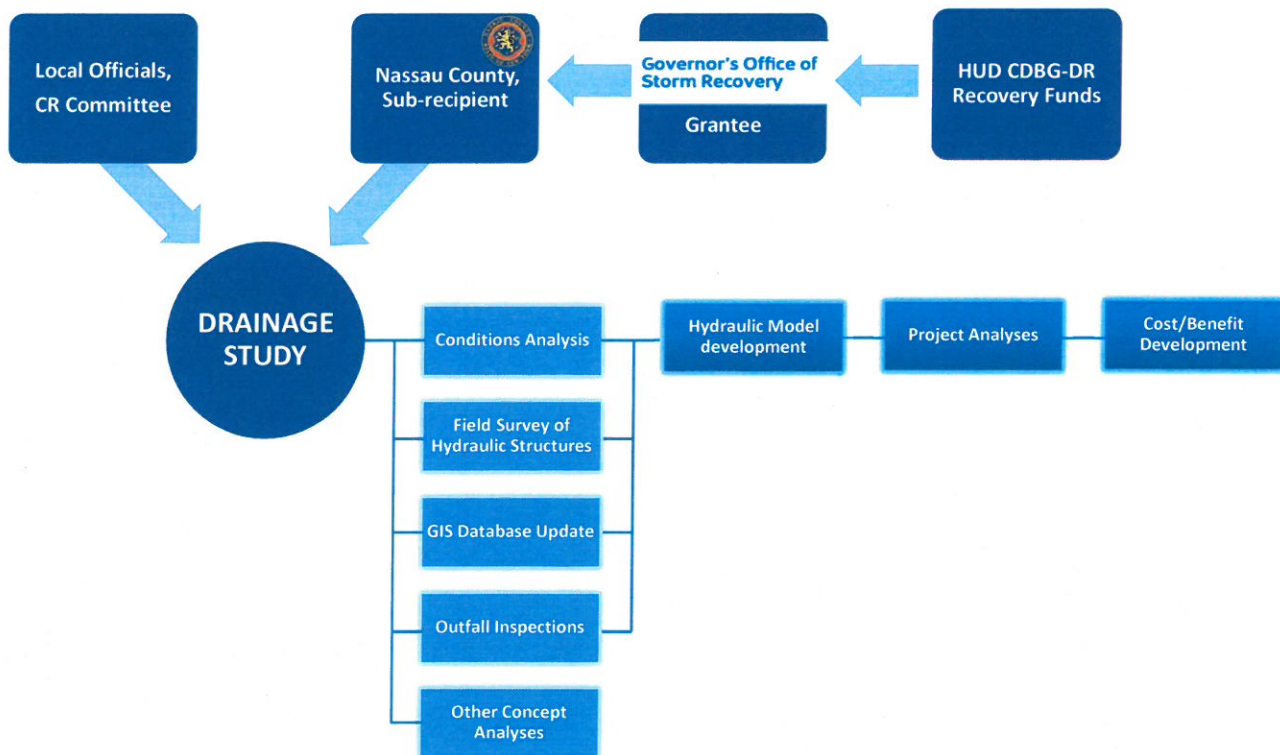
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## Nassau County Five Towns Drainage Study

### TIMELINE



### DRAINAGE STUDY







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## Nassau County Five Towns Drainage Study **Village of Lawrence**

### **IDENTIFIED FLOODING PROBLEM:**

Flooding occurs in the Village of Lawrence when stormwater from rainfall events combines with presence of tidal waters within the stormwater collection piping. The tidal waters reduce available capacity within the collection piping network and impede flow within the system until the local tidalwaters recede, allowing for the return of gravity flow to the outfall.



ROCK HALL ROAD OUTFALLS



OUTFALL AT THE LG&CC



MARBRIDGE ROAD

### **PROPOSED PROJECTS:**

#### **BACKFLOW PREVENTION**

The installation of a new backflow prevention device at the 60-inch diameter outfall near Causeway Road and North Street will limit surcharging of the drainage system during extreme surge events.

Impact: Reduce flooding of North Street during high tide events and up to a 2" rainfall.



#### **PIPE IMPROVEMENTS**

Pipe size improvements, additional pipes, and realignment/repair of pipes will eliminate constrictions provide additional convenience of stormwater, promote more efficient drainage were evaluated for the Woodmere drainage networks, primarily for the final pipe reach from the terminal manhole to the outfall, which is most often the controlling drainage feature. Improvements in pipe size will improve conveyance from the drainage network and limit flooding. Areas that will benefit from improvement include North street, Harrison Street, and Marbridge Road.



### **NEXT STEPS:**

Design and Construction - Nassau County