DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

CENAN-PPMD 22 December 2016

Mr. Frank Jurewicz
Chairman
Raritan & Millstone Rivers Flood Control Commission
P.O. Box 8736
Somerville, New Jersey, 08876

Mr. Jurewicz,

Reference is made to your letter from the Raritan Millstone River Flood Control Commission (RMRFCC) dated November 1, 2016. The RMRFCC expressed concerns regarding the ongoing flooding issues and difficulties experienced by the residents of the Borough of Manville and other communities within the Millstone River Basin. It noted disappointment with the findings documented in the Millstone River Basin, New Jersey, Flood Risk Management Feasibility Study, Final Feasibility Report and Appendices, dated November 2016.

Through the planning process, potential flood risk management measures were identified, screened, and evaluated in order to potentially recommend implementation of an alternative plan to assist in reducing future flood risks within the Millstone River Basin. One of the criteria necessary for the U. S. Army Corps of Engineers to recommend implementation of a flood risk management project is that an alternative plan must have a benefit-cost ratio (BCR) of one or greater. In other words, an alternative plan must possess benefits, or damages avoided, that are equal to or greater than the costs of the plan. Unfortunately, the study concluded that no flood risk management alternative plans in the Millstone River Basin met benefit-cost criteria necessary to recommend implementation of a flood risk management project.

The RMRFCC raised a number of concerns in its letter regarding the USACE feasibility study. I would like to take this opportunity to clarify some of the processes involved in a USACE feasibility study that relate to the concerns of the RMRFCC and doubtlessly shared by many of those within the study area affected by ongoing flooding issues.

- RMRFCC Concern: "The study area for the Bound Brook project involved many more communities, vastly increasing the number of properties suffering flood losses. Our study only involved portions of Manville, and did not consider flood losses in Somerville, Millstone, Franklin, and most notably, Hillsborough. Had these areas been included, documented flood damage would have been much higher."

  Response: Manville was selected within this investigation for detailed consideration of Federal participation in a flood risk management project as it is the highest impacted municipality in the Millstone River Basin. This is due to a relatively greater number and density of structures within the 1% annual chance exceedance floodplain (100 Year Floodplain) in the Manville area and consequently an estimated greater possibility of producing an economically viable project. Section 7.2 of the Final Feasibility Report, explains the method that USACE used to screen the Millstone River Basin. Please note that the feasibility

report can be found on the following link through January 2017: http://www.nan.usace.army.mil/Portals/37/docs/civilworks/projects/nj/frm/Millstone%20River/MillstoneFinalFeasibilityReportDecember2016.pdf

- RMRFCC Concern: "When your study finally got around to considering the value of the homes in our study, their values had dropped substantially due to repeated flooding. The average home in Manville's most affected area had dropped fifty percent from its value in 2005. Homes worth $300,000 then are worth $150,000 today. Conversely, the Bound Brook study was done at a time when valuations were much higher."

  Response: USACE calculates valuation of structures (homes or otherwise) based on depreciated structure value, not property value. Depreciated structure value is based on standard industry square foot value by type of home and construction, square footage of the structure, and condition of the structure. Damage to the structure and resulting benefits, or damages avoided, are based on this plus contents replacement cost. The same standard was applied to both Bound Brook and Manville as well as other USACE flood risk management projects.

- RMRFCC Concern: "In addition, Bound Brook study included many larger homes with higher intrinsic value. As noted above, the homes in our study area are much more modest in nature. We feel that the study methodology is fundamentally unfair to low and middle income communities, in that the values of our affected homes are so much lower than in more affluent communities with more expensive homes. Flood damage to our homes just does not translate to flood costs as high as in these communities. Even if every home in Manville were used in our study, it would still not add up to the BCR of 1 needed to qualify for further funding."

  Response: Two potential aspects exist with respect to this: 1) As stated in the response to the previous bulleted RMRFCC concern, depreciated structure value and the market value of a structure are different. USACE calculates valuation of structures based on depreciated structure value, not property value. This is based on standard industry square foot value by type of home and construction, square footage of the structure, and condition of the structure. Damage to the structure and resulting benefits, or damages avoided, are based on this and contents replacement cost. 2) While affluent neighborhoods tend to contain residential structures with greater square footage, thus higher depreciated structure values, thus greater flood damages and greater benefits, per structure, relatively less affluent areas tend to have smaller property parcels and contain a greater number of structures subject to flooding damages per comparable unit area and potentially more benefits to economically justify implementation of a flood risk management project. This general principle tends to hold true in urban and suburban areas with little developable open space, of which Manville is representative. Indeed, less affluent neighborhoods generally produce more project benefits, acre for acre, than affluent neighborhoods.

- RMRFCC Concern: "But even using the depressed Manville valuations, your study estimated an annualized loss of $1,300,000 per year. It would seem that the net worth of this annual loss, over a twenty to thirty year period, would generate a current value of approximately $30,000,000. It would seem that every house affected in Manville could be elevated or razed for that kind of money, yet the BCR failed to reflect this. (This question was raised in your public presentation of the study, but we have yet to receive an answer to it)."

Response: When analyzing alternatives for economic justification the USACE develops annualized benefits vs. annualized costs to calculate BCRs and Net Benefits. If USACE were to add annualized benefits over a twenty to thirty year period it would need to do the same with annualized costs, with the end result being the same.

While we understand the ongoing plight of those residents, business owners, and other local stakeholders who continue to be affected by flooding from the Millstone River and its tributaries within the Millstone River Basin, we are limited to recommending implementation of a USACE Federal cost-shared flood risk management project only if it meets the criteria discussed above and presented in the report. We do not have any discretionary funding programs that can provide further assistance for this study area. The Federal Emergency Management Agency (FEMA) Hazard Mitigation Program and the New Jersey Department of Environmental Protection Blue Acres Program may have funding sources that the RMRFCC may be able to utilize for the community.

If you have any questions or concerns please feel free to contact Mr. Robert Greco, Project Manager, at (917) 790-8394, email: robert.greco@usace.army.mil.

Respectfully,

Robert Greco

Robert Greco
Project Manager
Civil Works Project Management Division
N.Y. District, U.S. Army Corps of Engineers