

Essex County, NJ

LLPT 1 Meeting Notes

ATTENDEES

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Township of South Orange Village, NJ

DATE: Wednesday, November 18, 2020 **TIME:** 11:00 AM – 12:15 PM

LOCATION: Virtual Webinar

Action Item	Owner
1. FEMA to provide follow up meeting notes, fact sheets, presentation, and FTP link to community	FEMA/STARR II/CERC
2. LLPT Members (Township of South Orange Village, NJDEP, USACE) to upload any relevant data and documents to file transfer protocol (FTP) site	All
3. Township of South Orange Village to consider flood risk mapping desired for levee systems	Township of South Orange Village
4. STARR II to review as-builts to consider levee or floodwall concept of the Left Bank North Levee and wall system	STARR II
5. FEMA to schedule touchpoint call(s) to share progress with LLPT	FEMA/STARR II/CERC

FTP Site Information

Browser link:

[South Orange, NJ LLPT](#)

(Please use the above link to view Levee Fact Sheets and upload any local information about the levees you may have.)

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ATTENDEES *Continued*

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AGENDA

WELCOME AND INTRODUCTIONS

BACKGROUND AND CONTEXT

LEVEE SYSTEM OVERVIEWS

PATH FORWARD AND NEXT STEPS

MEETING OVERVIEW

The Federal Emergency Management Agency (FEMA) Region 2 levee team, U.S. Army Corps of Engineers (USACE) New York District, and the New Jersey Department of Environmental Protection (NJDEP) coordinated with the Township of South Orange Village, NJ municipal officials to initiate a levee discovery project to estimate potential flood hazards for two small levee systems along the East Branch Rahway River. These levee systems are part of the South Orange Flood Control Project constructed by USACE in 1976.

Flood hazards and risks in levee-impacted areas are complex and can change over time. FEMA initiated the discussion with the Township of South Orange Village to better understand the status of the levee systems and gather information that can inform flood risk projects. The levee discovery project will also facilitate a better understanding of existing flood hazards and potential flood risk mapping options for the levee systems along the East Branch Rahway River.

As part of this outreach, FEMA encourages participation from community, State and Federal officials and other stakeholders through development of a Local Levee Partnership Team (LLPT). The purpose of this group is to share information about the levee systems and participate in discussions on associated flood hazards and potential flood risk analysis and mapping options.

MEETING NOTES

Shu Rahman, FEMA Region 2 Project Monitor, and Trevor Cone, Engineer at STARR II, introduced themselves and co-presented.

Shu explained this is an exploratory dialogue to gain insight on the current status including the Left Bank North Levee and Right Bank

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South Levee systems that are part of the South Orange Flood Control Project (see LLPT1 Presentation for maps).

There are **no impending regulatory FEMA map changes** for the Township of South Orange Village; however, as part of an upcoming Base Level Engineering project, FEMA anticipates using the latest topographic LiDAR data, hydrologic data, and modeling techniques to assess the validity of older floodplain mapping in New Jersey, such as that of the East Branch Rahway River, for which some of the data and analysis dates to the early 2000's.

FEMA assesses levee-related flood risk and can accredit levees as reducing risk from the 1% annual chance flood, but it does not own, operate, maintain, inspect, or certify levees.

Trevor discussed the geography of the flood control project and levee systems and noted the project was built in 1976 to contain the 1% annual chance flood at that time; however, the updated 1% annual chance flowrates reported in the 2007 FEMA Flood Insurance Study (FIS) are higher than the flood control project design flowrates. As a result, **the flood control project is no longer able to contain the 1% annual chance flood within the channel at all locations.** This is shown on the 2007 FEMA Flood Insurance Rate Maps (FIRMs) for the community.

Each levee system was discussed in detail regarding potential flood impact and freeboard.

The **Left Bank North Levee** is about 500 feet long and runs along the river next to Clark Street north of Meadowbrook Place. This levee system does not appear to meet minimum freeboard requirements of CFR 65.10 and may be considered **freeboard deficient**. The preliminary freeboard estimates were determined based upon a comparison of the levee crest elevations from the as-built plans and the effective 1% annual chance flood elevations for the East Branch Rahway River.

The **Right Bank South Levee** is about 690 feet long and runs along the river south of West 3rd Street. This levee system may meet the

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freeboard requirements of CFR 65.10. The preliminary freeboard estimates were determined based on a comparison of the levee crest elevations from the as-built plans and the effective 1% annual chance flood elevations for the East Branch Rahway River.

If, after discussions with the LLPT, it is determined levee systems will not be accredited, FEMA offers communities several mapping options to best identify the flood risk.

For the levees in Township of South Orange Village, given the available data, the most applicable mapping methods are **Natural Valley** and **Freeboard Deficient**.

The Natural Valley Procedure does not require any data from the community and depicts the flood hazard as if the levee does not impede flood flow.

Mapping of flood risk using the Freeboard Deficient Procedure requires certified data and documentation from the community in accordance with 44 CFR 65.10 and the Freeboard Deficient Procedure (see presentation). The flood risk is identified as Zone D, suggesting an undetermined flood risk for which flood insurance is not required.

Shu requested the community share any technical data associated with the levee systems, such as channel or bridge improvements, flood records, maintenance reports, or planned infrastructure projects in the vicinity (see presentation for full list).

FEMA will initiate touchpoint calls and an LLPT2 meeting during the Winter of 2020-2021 to continue the collaborative effort.

DIALOGUE

Comment:

Trevor Cone, STARR II –

The NLD Leveed Area is based upon the levee crest height extended landward of the levee to the point where it intersects the ground elevation. The Leveed Area is not based upon FEMA's Base Flood

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Elevation (BFE) or what would be shown on FEMA's flood maps. The crest of the levee could be lower or higher than the BFE.

Comment:

Stephanie Nurre, STARR II –

The 2007 Effective FEMA flood map does not show the levee symbol or an X Shaded “Levee Area” behind where the levees are. This is likely due to its age and inconsistent guidance at the time – newer FEMA maps would show these features. Instead, the 2007 Effective FEMA flood map shows an implied reduced risk area of Zone X (Unshaded).

Question:

Walter Clarke, South Orange Village –

What factors go into where levees are constructed? Are they intended to equalize flood elevations on each side of the river?

Response:

Stephanie Nurre, STARR II –

Levees can help to fill naturally low points along a river course so that floodwaters continue downstream and do not flood the adjacent land. Levees are also often constructed to reduce flood risk to nearby buildings and infrastructure.

Comment:

Jeffrey Gross, USACE –

The 2016 inspection did not reveal anything that would suggest the project would not function properly during a flood. The NLD Leveed Areas also did not identify any loss of life should the levees fail. The South Orange Flood Control Project could receive a periodic inspection in 2021, dependent on funding. The cost of the inspection could be as much as \$250,000.

Comment:

Salvatore Renda, South Orange Village –

For the Right Bank South Levee, there is a significant height difference between the levee crest (higher) and the homes to the west (lower)

(Note: This is substantiated by the freeboard graph in the presentation.) The Left Bank North Levee is coincident with the channel wall.

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Comment:

Jeffrey Gross, USACE –

Most of the walled channel of the project is considered retaining wall, rather than floodwall. A floodwall is defined as 3 ft or more of exposed wall above grade on the landward side. Less than 3 ft is considered retaining wall. Floodwalls have different inspection and performance criteria than retaining walls.

Question:

Michael Candarella, South Orange Village –

The Public Works building farther south of the Right Bank South Levee has been flooded with 8 feet of water. It could help if floodwaters were diverted to the other side of the river to occupy Waterlands Park.

There are also bends in the river and a railroad underpass further south that causes the water to backup into Public Works. **Can FEMA extend the Right Bank South Levee south to protect the Public Works building? Or can FEMA help with mitigation efforts?**

Response:

Shu Rahman, FEMA –

FEMA can capture this information as a future mapping and mitigation need. FEMA notes mitigation of the Public Works property is already listed as a mitigation action in the Essex County Hazard Mitigation Plan (HMP). Projects listed in HMPs can be eligible for Hazard Mitigation Assistance (HMA) funds.

Jeffrey Gross, USACE –

The gravel and mulch piles north of the Public Works building may be causing shoaling in the river channel per aerial imagery. Consider relocating these piles to improve flood flows and floodplain capacity during a flood.

Question:

Michael Candarella, South Orange Village –

Much of the walled channel has chain link fence on top of it and is behind residential properties. Trees have fallen and damaged the fence. Homeowners have called Public Works to repair the fence.

Who is responsible for fence repairs?

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Response:

Jeffrey Gross, USACE –

Repairs to the fence or any part of the project is the responsibility of the project sponsor which is the Township of South Orange Village.

Clyde Otis, South Orange Village –

Responsibility for repairs to the fence may depend on exactly where the fence is located (private or public property).

Kunal Patel, NJDEP –

As the project sponsor, maintenance of the flood control project is required to remain eligible for rehabilitation by USACE of damages to the system caused by flooding.