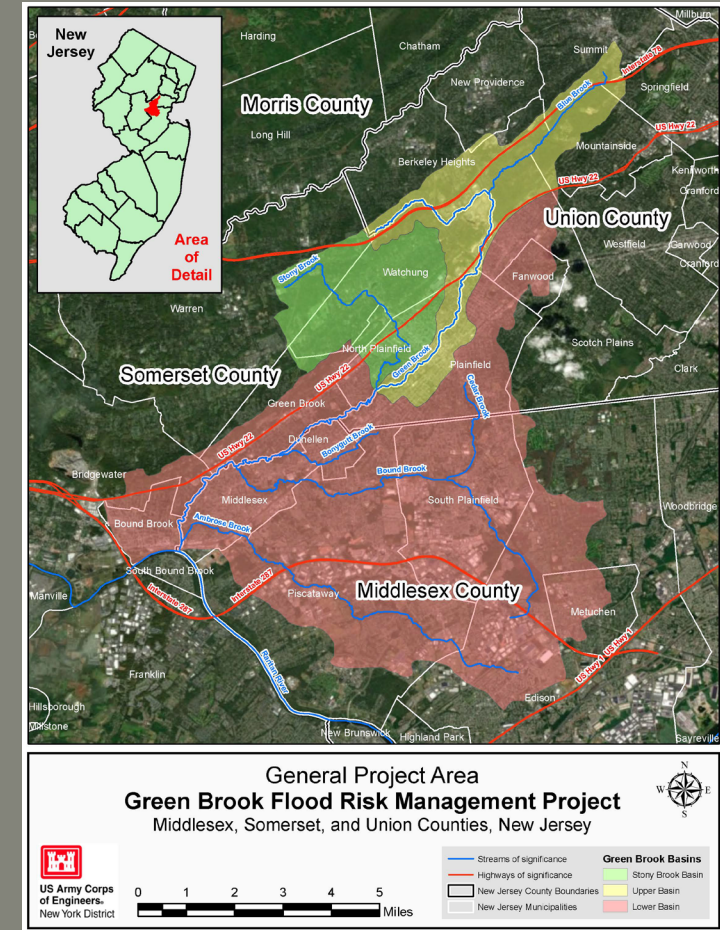


GREEN BROOK UPPER BASIN FLOOD RISK MANAGEMENT PROJECT SOMERSET, MIDDLESEX AND UNION COUNTIES, NEW JERSEY GENERAL REEVALUATION REPORT

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) SCOPING MEETING

DECEMBER 2023



"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."



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MEETING FORMAT

7:00pm – 7:30pm: Welcome/Poster Board Viewing

7:30pm – 8:15pm: Formal Informational Presentation

8:15pm – 9:00pm: Question/Answer Session



ASK AND GROUND RULES

What are we asking for?

- Feedback about the alternatives presented.
- Available information related to resources issues and concerns.
- Emails or Letters specifying what your concerns or things that you think we should consider.

Ground Rules for the Meeting

- Please hold questions until after the presentation.
- Keep an open mind.
- Please be respectful of others.
- Please keep to your allotted time (~3 minutes) so others can get a chance to speak. If you run out of time, please send us an email with your comments.



AGENDA

- National Environmental Policy Act (NEPA) overview
- NEPA Scoping Process
- Study Area and Scope
- Problem Identification
- Study Authority, Goals & Objectives
- Opportunities, Constraints & Considerations
- General Reevaluation Report (GRR) Study Process
- Study Schedule
- Contact Information

****The Green Brook Upper Basin General Reevaluation Report is being developed in partnership with the NJDEP Office of Dam Safety & Flood Engineering***



NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Disclosure:

- ❖ Federal agencies are required to determine and consider the “effect of their actions on the human environment” during planning and decision making.
- Federal Actions that can trigger NEPA:
 - Funding
 - Permits
 - Construction
- Resources assessed as part of the “human environment” under NEPA:
 - Social
 - Economic
 - Natural
 - Historic
- Relevant NEPA Document Types:
 - Environmental Impact Statement (EIS)
 - Environmental Assessment (EA)



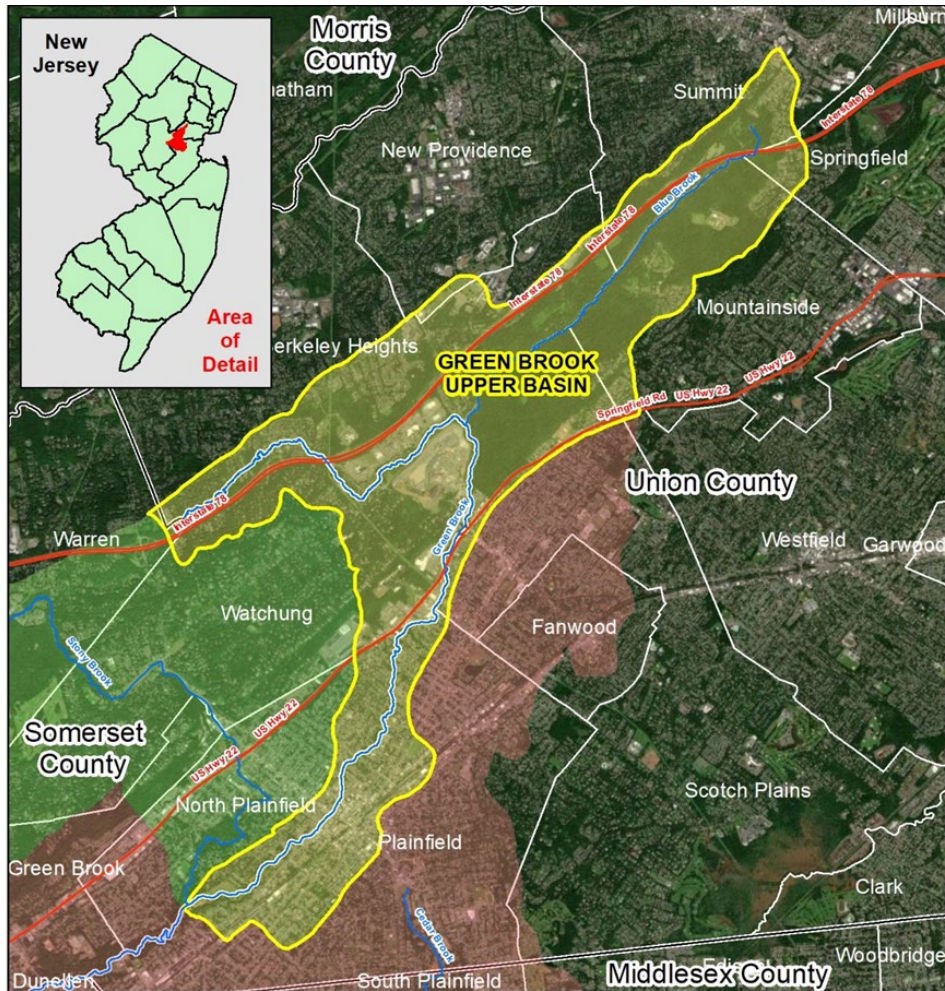
NEPA SCOPING PROCESS

- Assists in determining NEPA document type (EIS vs EA)
- Identifies:
 - Significant resources to be evaluated
 - Community issues or concerns related to the development of plans
 - People or organizations who are interested in the proposed action
 - Any information sources that might be available to analyze and evaluate impacts

Scoping Period
04 December 2023 – 19 January 2024
NEPA Scoping Document:
<https://www.nan.usace.army.mil/GRR>



STUDY AREA AND SCOPE



- Stony Brook Basin**
- Green Brook Lower Basin
(in construction)**

- Part of the overall Green Brook Flood Risk Management (FRM) Project
- Authority: P.L. 99-162 Section 401
 - Authorized construction Flood Risk Management (FRM) project
 - Recommendations contained therein were modified and validated in 1997 GRR
 - The recommended actions in the Upper Basin were deferred by Water Resources Development Act (WRDA) of 1998
 - 2014 Water Resources Reform and Development Act (WRRDA) removed 1998 deferral
 - 2021 Validation Study concluded that the Upper Basin recommended plan of two dams and channel modification was no longer justified
- Study focuses on evaluating FRM measures within the municipalities of Watchung, Scotch Plains, North Plainfield, and Plainfield



STUDY GOALS AND OBJECTIVES

Goal

Reduce flood risk to vulnerable population and reduce economic and social impacts from riverine flooding in the Upper Basin.

Objectives

1. To reduce the flood vulnerability of communities in the study area, especially communities with environmental justice concerns, by reducing economic damages and life loss, and improving community resilience in the study area;
2. To preserve, maintain and to, the extent possible, enhance the resources of the existing natural, cultural, and historic resources in the project area;
3. To reduce flood risk to critical infrastructure (hospitals, municipal buildings, emergency response facilities and transportation corridors) in the study area by reducing disruption to the operation of public health and safety services;
4. To preserve to the extent possible existing open space areas and associated recreational opportunities in the project area; and
5. To provide a plan that is compatible with existing and planned USACE FRM projects within the basin.

OPPORTUNITIES, CONSTRAINTS AND CONSIDERATIONS

Opportunities

- Reduce vulnerability of Upper Basin residents and properties to riverine flooding
- Reduce the vulnerability of flooding to Environmental Justice communities located within the study area – Plainfield, North Plainfield
- Enhance flood risk communication to Upper Basin residents
- Evaluate adverse effects from flooding to historic properties
- Reduce flooding impacts to transportation infrastructure including buses and railway infrastructure
- Reduce structural vulnerability to bridges and their foundations from high flow velocities and debris from Green Brook

Constraints

Physical

- Space constraints related to existing structures and built infrastructure (that may limit the ability to implement levees)

Considerations

- Design of FRM measures should consider hydraulic interdependence of the Green Brook Lower, Stony Brook, and Upper Basins and prevent induced flooding by maintaining the existing flow of each system
- Design of dams for detention basins will comply with the latest USACE regulations on the design of dams
- Minimize impacts to federally-listed endangered and threatened species
- Minimize impacts to state-listed endangered and threatened species and state designated significant habitats
- Minimize/avoid adverse effects to Green Acres and historic properties from FRM measures
- Minimize/avoid adverse effects to historic properties from FRM measures
- Avoid impacts to Hazardous, Toxic, and Radioactive Waste (HTRW) sites

FLOOD RISK MANAGEMENT (FRM)

- No flood risk management project can eliminate the risk of flooding. Given a long enough period of time, most projects will experience an event that is larger than the event which they were designed.
- Flood risk management projects can only reduce the frequency and/or severity of flooding and provide additional time to respond.
- Physical features are only a single component of a flood risk management approach. Insurance, zoning and an Emergency Action Plan (EAP) are some other important aspects of flood risk management.
- Communication of accurate and timely information about the risk of living in a flood prone area is critical and best implemented at the local level.
- Flood safety is a shared responsibility, and a collaborative approach is required to effectively manage the risk of flooding and to save lives.

(USACE, FEMA, State, County, Local Government, Emergency Personnel, Residents)



GENERAL REEVALUATION STUDY PROCESS









3 Year Planning Process

- Purpose is to reformulate flood risk management alternatives and reaffirm federal interest within the Upper Basin
- Follows iterative plan formulation and evaluation process
 - Evaluate all possible flood risk management measures
 - Develop initial array of alternatives
- Tentatively Selected Plan (TSP)
 - Alternative that maximizes net benefits relative to other alternatives is identified as the TSP
 - Draft Integrated General Reevaluation Report (GRR)/NEPA Document
 - Public/agency review/comment
- Recommended Plan
 - Final GRR Report/NEPA Document
- Chiefs Report
 - Submitted to Congress for authorization/appropriation



PROJECT IMPLEMENTATION SCHEDULE

The General Reevaluation Report (GRR) is in the planning phase of the project, USACE will detail the planning phase and identify a recommendation in a Draft Integrated Feasibility Report and National Environmental Policy Act (NEPA) document that will be released for public review and comment in 2024. Following the planning phase, design will take a few years while construction is completed in the Lower Basin Project features by 2030 before work can take place in the Upper Basin.

PLANNING	DESIGN	CONSTRUCTION	OPERATION & MAINTENANCE
			
Provide an agency recommendation in a final feasibility report and National Environmental Policy Act documentation	Conduct detailed engineering analysis and designs for proposed action	Award the construction contract and build the project	The non-Federal sponsor conducts operation and maintenance on the project features
2023 - 2025	2026 - 2030	2031 - 2034	2034+
			



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ALTERNATIVES OVERVIEW – ARRAY OF ALTERNATIVES

The array of alternatives is formulated from the FRM measures. All retained measures are considered in the initial array of alternatives.

Alternative	Alternative Description
Alternative 0	No Action **Establishes baseline against which project benefits are measured and is required by NEPA
Alternative 1	Floodwalls and levees (Screened due to cost and level of performance)
Alternative 2A	Green Brook channel modification with one bridge raising and New Providence Gorge Detention Basin Location 1
Alternative 2B	Green Brook channel modification with one bridge raising and New Providence Gorge Detention Basin Location 2 (Screened out due to higher costs and greater impacts including inundation of Weldon Quarry)
Alternative 3	Tunnel Diversion – Cedar Brook Diversion Tunnel System (Screened out due to costs)
Alternative 4	Nonstructural Plan consisting of acquisition, elevation, and floodproofing
Alternative 5A	Combination Plan – Floodwalls and levees, channel modification, NNBF, and nonstructural measures
Alternative 5B	Combination Plan – Channel modification, NNBF, and nonstructural measures

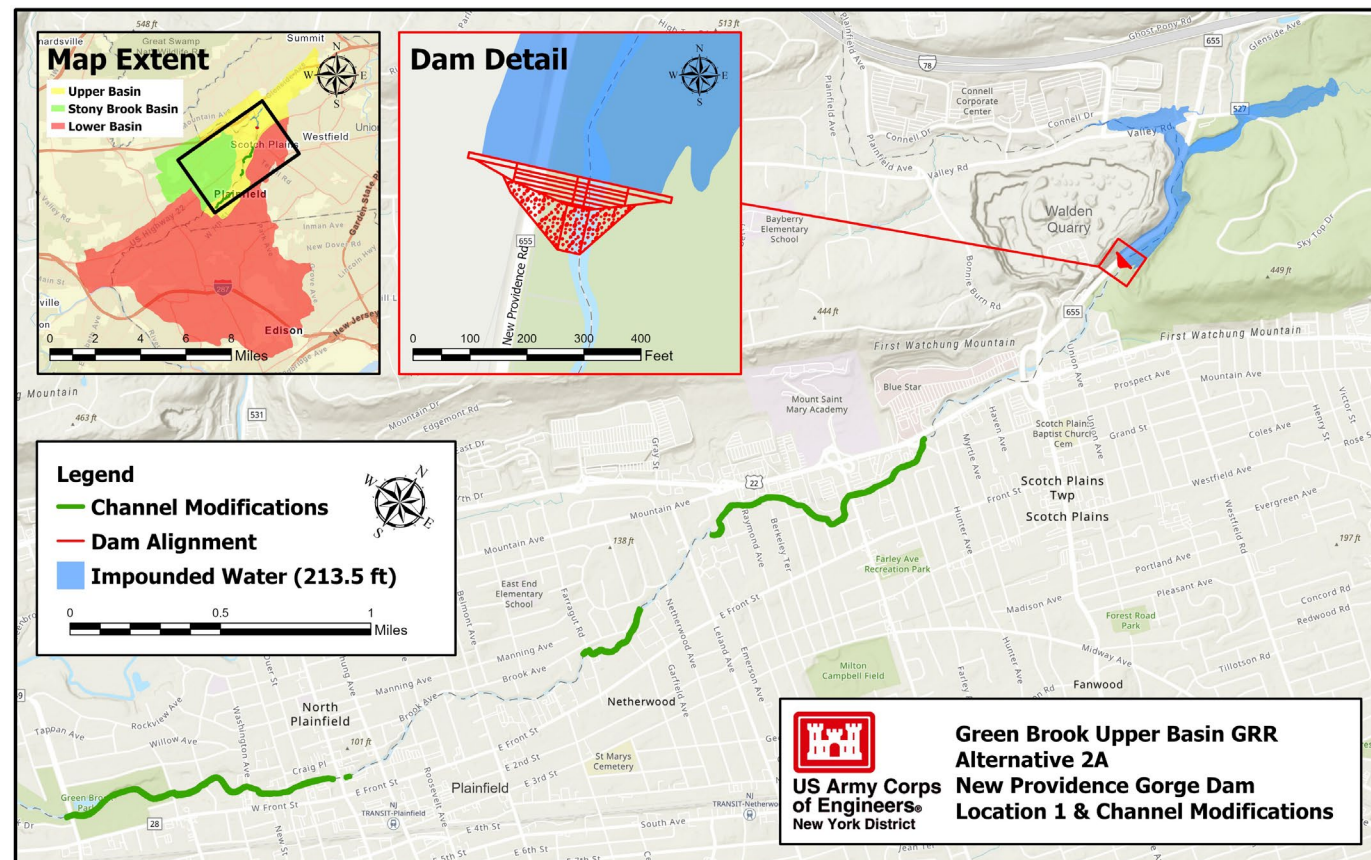
ALTERNATIVE 2A: CHANNEL MODIFICATION & UPSTREAM DETENTION PLAN

Channel modification – Green Brook:

- Total length of channel: 12,400 feet
- Width of channel: Varies
- Level of performance estimated at 4% AEP (25-year storm)
- One bridge raising recommended

Detention basin at New Providence Gorge:

- Location 1: 200-foot cast concrete dam with 150 foot spillway
- Assumes level of performance of 1% annual exceedance probability (AEP) or 100-year storm
- Dry detention basin that will only retain flood waters after a storm

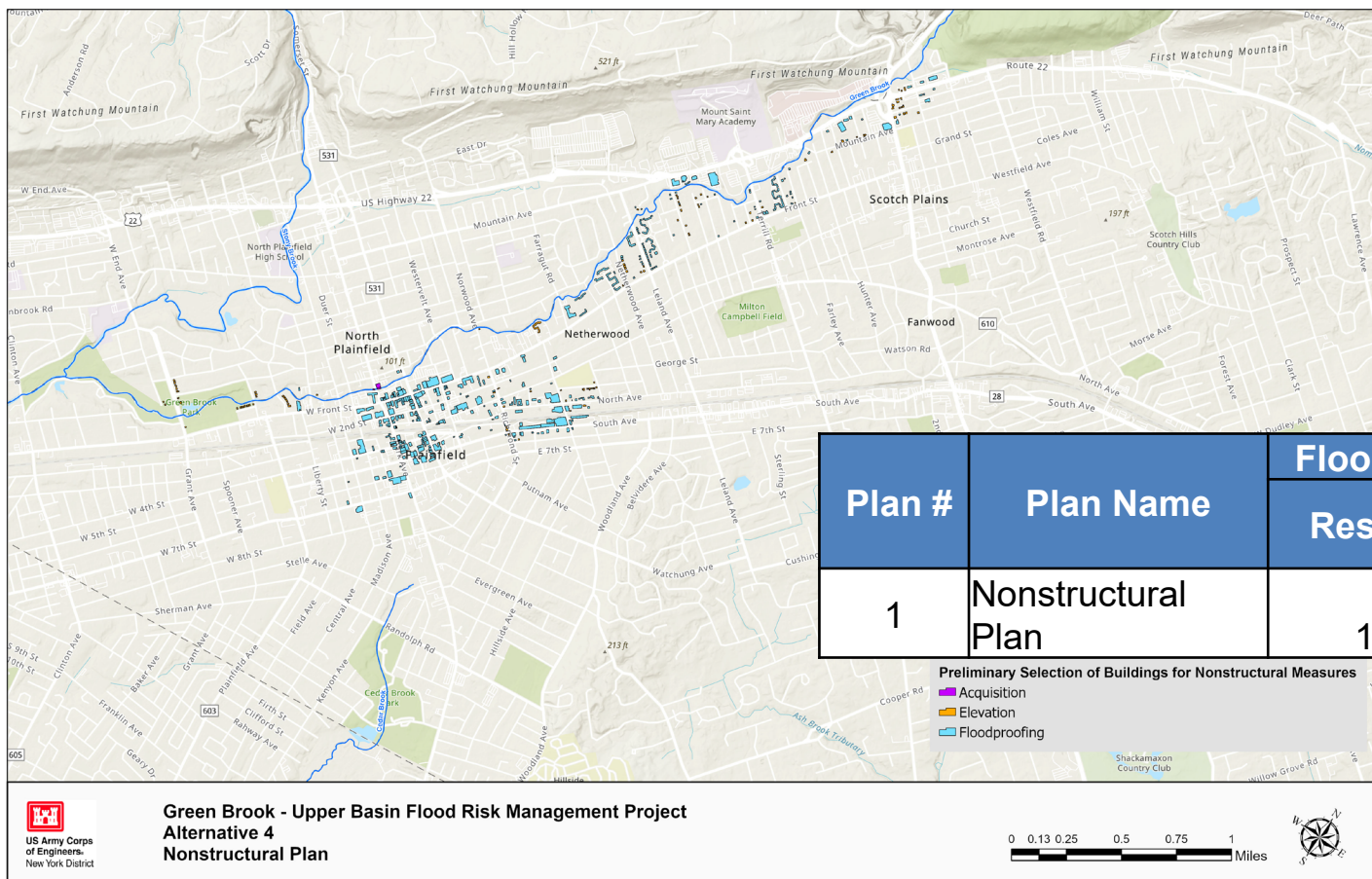


ALTERNATIVE 4: NONSTRUCTURAL MEASURES PLAN

Plan considers the use of the structure, the construction type (wood frame/masonry), the foundation height, and the flood inundation depth for the 1% AEP.

Considerations and Challenges:

- Nonstructural plan does not modify flood water volume or velocity
- Residual risk remaining for local residents, USACE would recommend evacuation of residents in conjunction with nonstructural measures
- Additional refinement needed in selection of eligible structures



Plan #	Plan Name	Floodproofing		Elevation		Buyouts		Total
		Res	Non-Res	Res	Non-Res	Res	Non-Res	
1	Nonstructural Plan	107	235	98	13	0	3	456



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Green Brook - Upper Basin Flood Risk Management Project
Alternative 4
Nonstructural Plan



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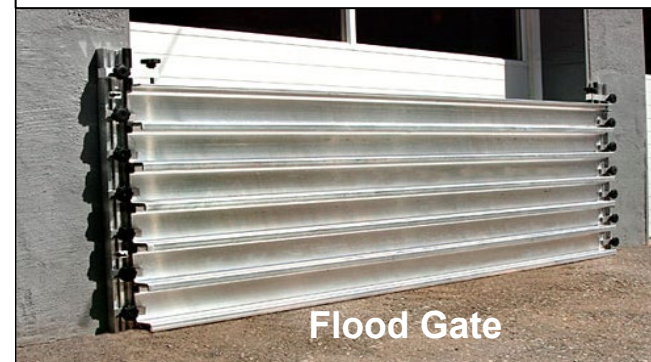


TYPICAL NON-STRUCTURAL MEASURES

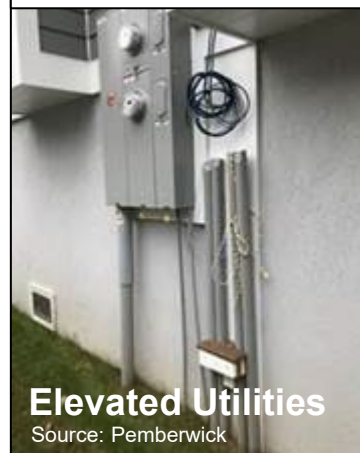
Structure Elevation - Applicable to Residential & Non-Residential Buildings



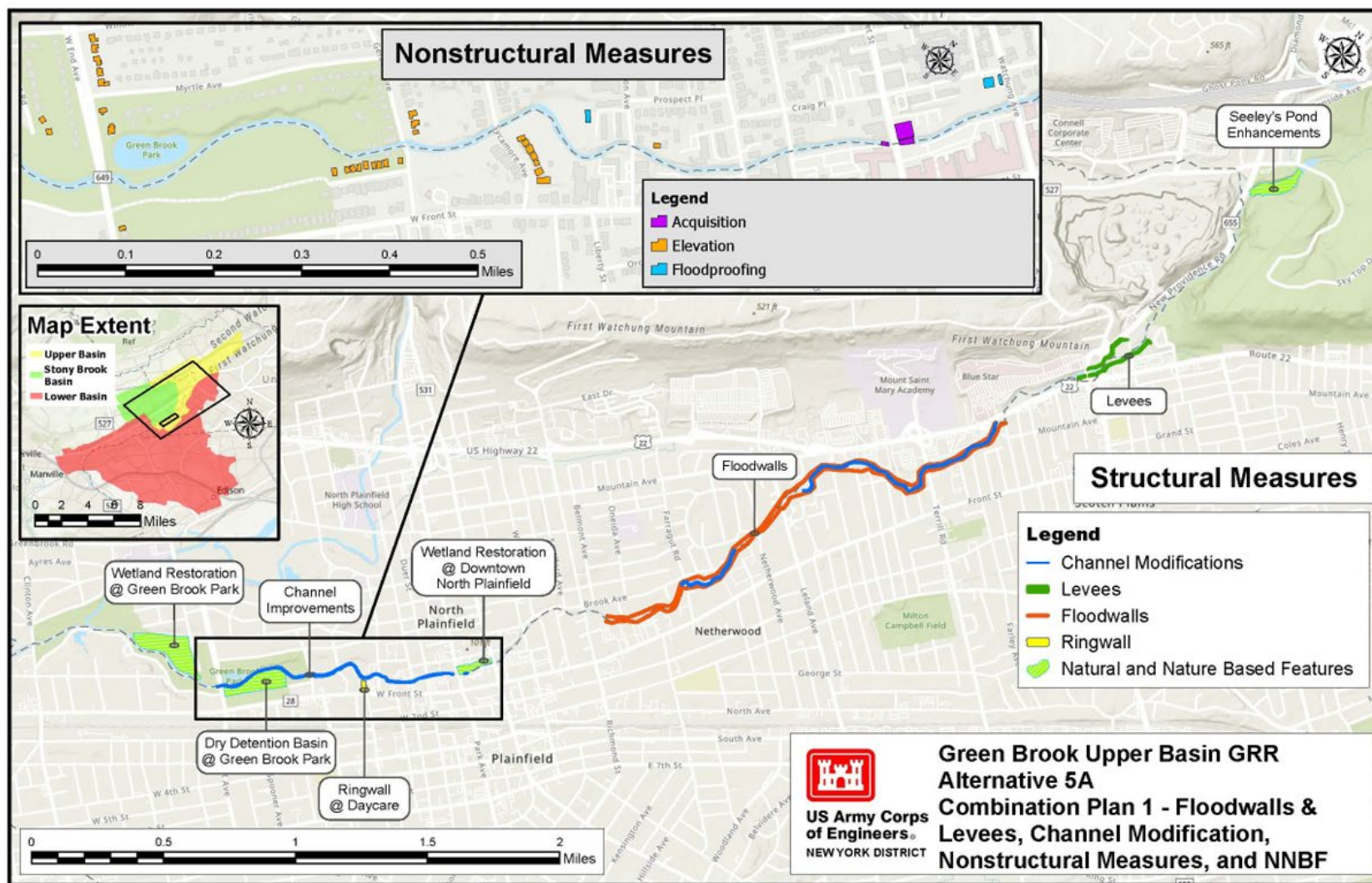
Dry Floodproofing – Applicable to Non-Residential Buildings Only



Wet Floodproofing - – Applicable to Residential & Non-Residential Buildings



ALTERNATIVE 5A: COMBINATION PLAN 1



Plan Features:

- **Increase flood storage:**
 - Dredging Seeley's Pond
 - Wetland Restoration
 - Dry Detention
- **Floodwalls & Levees**
- **Channel Improvements**
- **Nonstructural Measures:**
 - Elevation
 - Floodproofing
 - Acquisition



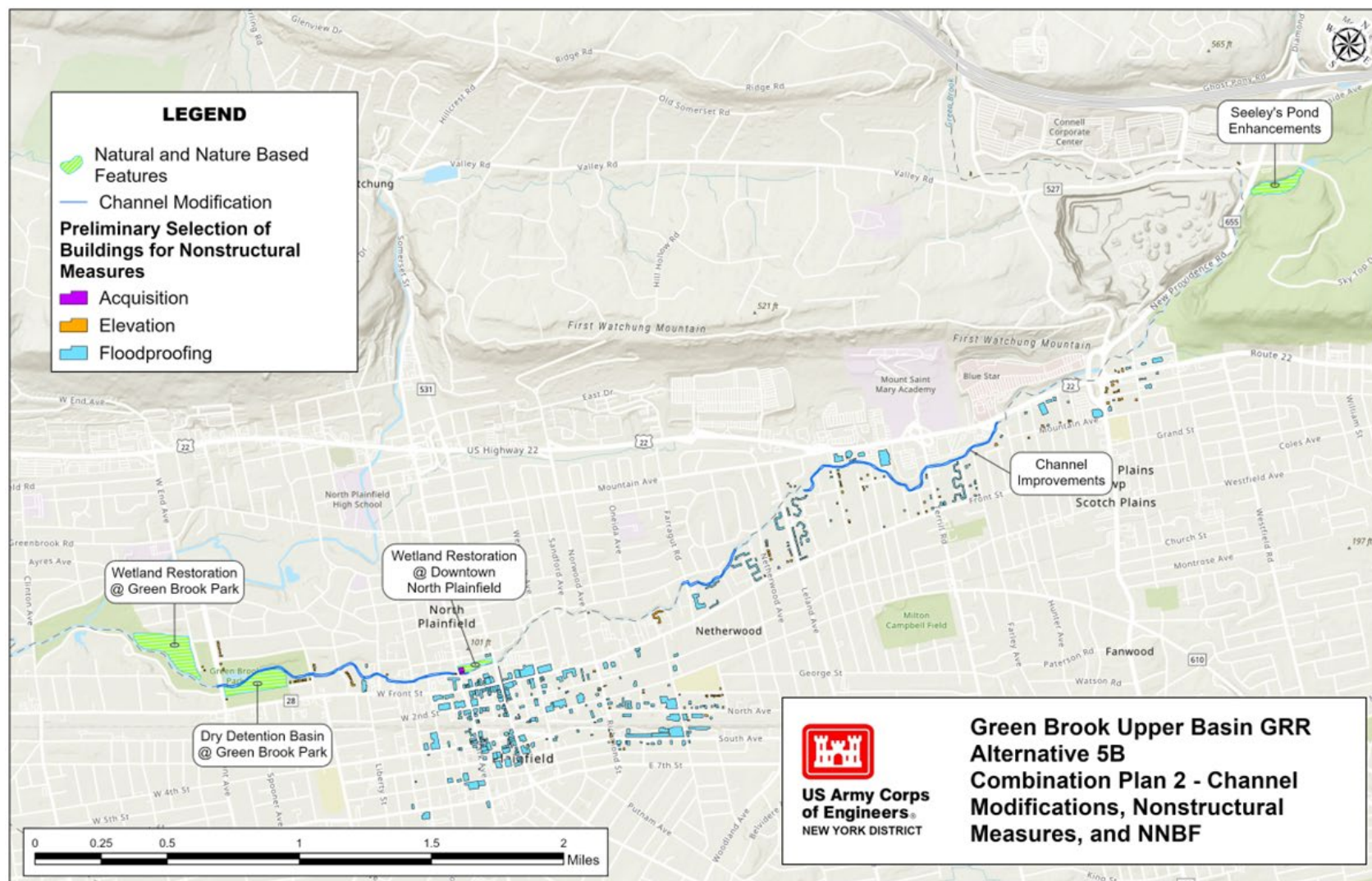
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ALTERNATIVE 5B: COMBINATION PLAN 2



Plan Features:

- **Increase flood storage:**
 - Dredging Seeley's Pond
 - Wetland Restoration
 - Dry Detention
- **Channel Improvements**
- **Nonstructural Measures:**
 - Elevation
 - Floodproofing
 - Acquisition

THANK YOU, POINTS OF CONTACT, & DISCUSSION

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Scoping Meeting Comments

Send any questions and/or comments to
GreenBrookFRMProject@usace.army.mil

Comments Due:

19/January/2024

Project Webpage

<https://www.nan.usace.army.mil/GRR>



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