

# Public Information Meeting

## City of Torrington

### Local Flood Protection Project



**Presented by:**

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Milone & MacBroom, Inc.

February 18, 2009



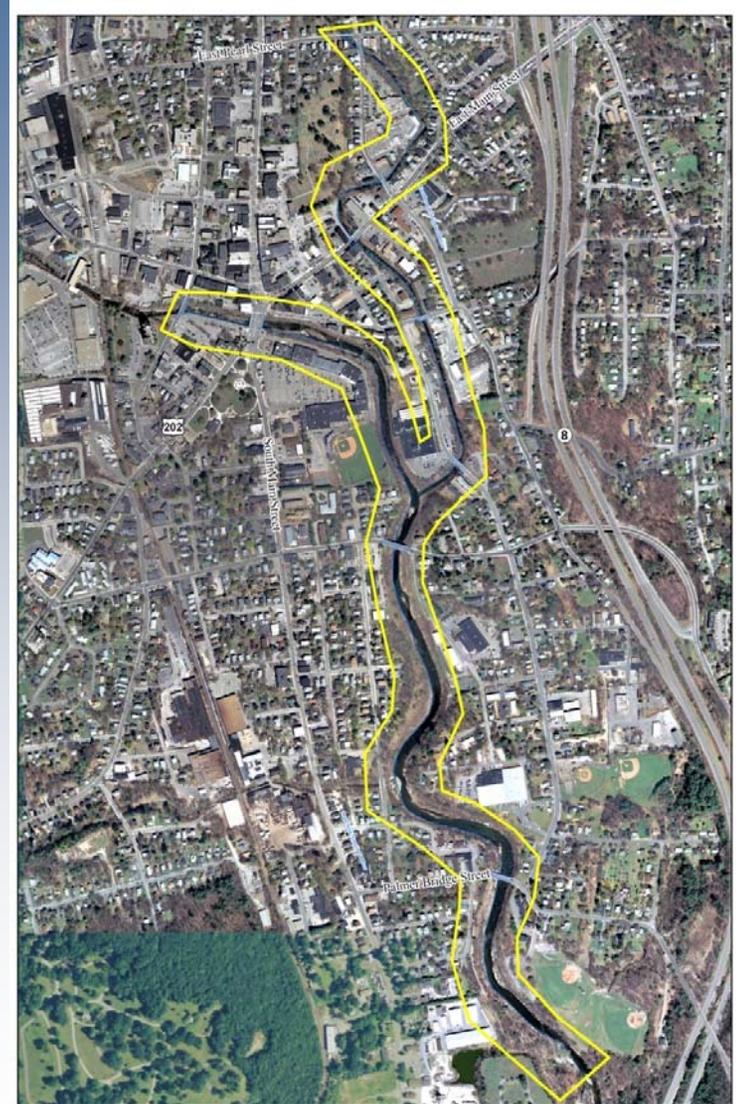
# EFFECTS OF FLOODING IN 1955

In 1955, consecutive hurricanes ravaged the Naugatuck River corridor and flooding destroyed much of downtown Torrington.



# PROJECT HISTORY

- Pursuant to the 1950 Flood Control Act, the Army Corps of Engineers authorized construction of the Torrington Local Flood Protection Project.
- East Branch and Main Stem improvements were constructed in 1957 - 1959.
- West Branch Improvements were constructed in 1959-60.



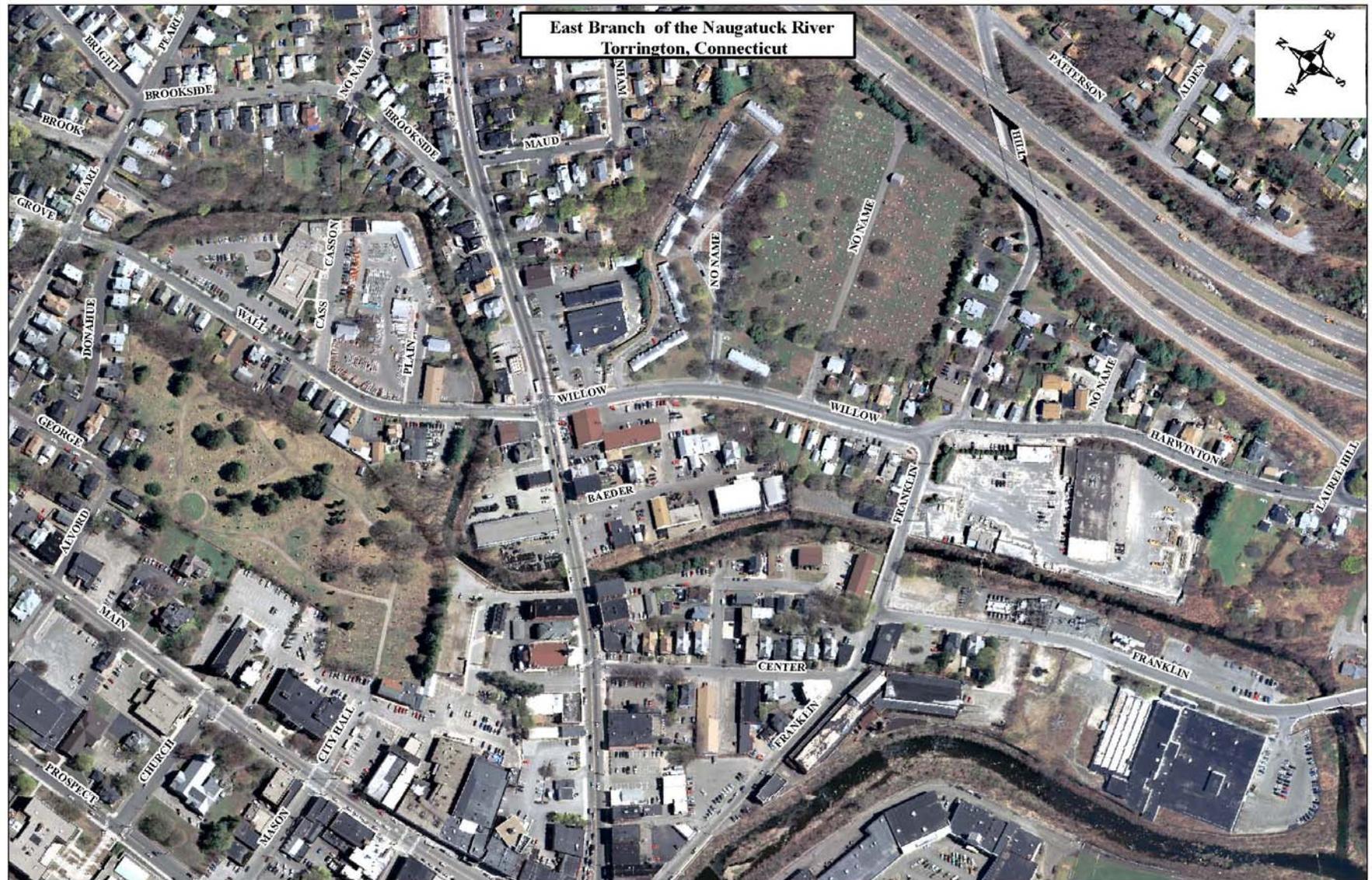
# FLOOD CONTROL ELEMENTS

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- Straightening, deepening and widening of the river channel.
- Construction of flood control walls along one or both river banks.
- Construction of dikes or levees.
- Construction of Hall Meadow Brook and East Branch flood control dams (1961 – 1964).
- Corps design protects against the “flood of record”, which is greater than the FEMA 100-year statistical flood.



# EAST BRANCH



# WEST BRANCH



# UPPER MAIN STEM



# LOWER MAIN STEM



# RECENT PROJECT HISTORY

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- ACOE inspections in August and October 2006 identified maintenance and physical deficiencies.
- Excessive vegetation growth on river banks and levees.
- Encroachment onto the levees.
- Structural integrity of walls.
- Hydraulic deficiencies at outfalls and catch basins.



# EXAMPLES OF VEGETATION GROWTH



# OTHER AREAS IN NEED OF ATTENTION



# ARMY CORPS' RECOMMENDATIONS

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- Remove trees and other vegetation.
- Fortify portions of the levee.
- Inspect floodwalls and make necessary repairs.
- Inspect pipes, outlets, conduits and gates and make repairs as necessary.
- Remove accumulated debris.
- Conduct detailed inventory and inspection following vegetation removal.
- Remove all obstructions to river flow, including vegetation and accumulated sediment.



# TORRINGTON RESPONSE

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- Initial inspection in winter 2007.
- Preparation and approval of Maintenance Deficiency Correction Plan in May 2007.
- Removal of debris in channel and catch basin cleaning by City forces.
- \$100,000 local funding approved in January 2008 and secured DEP grant funding in spring of 2008.
- Vegetation clearing around structures in the summer of 2008. Cost ~ \$230,000
- Structural inspection in the fall of 2008.



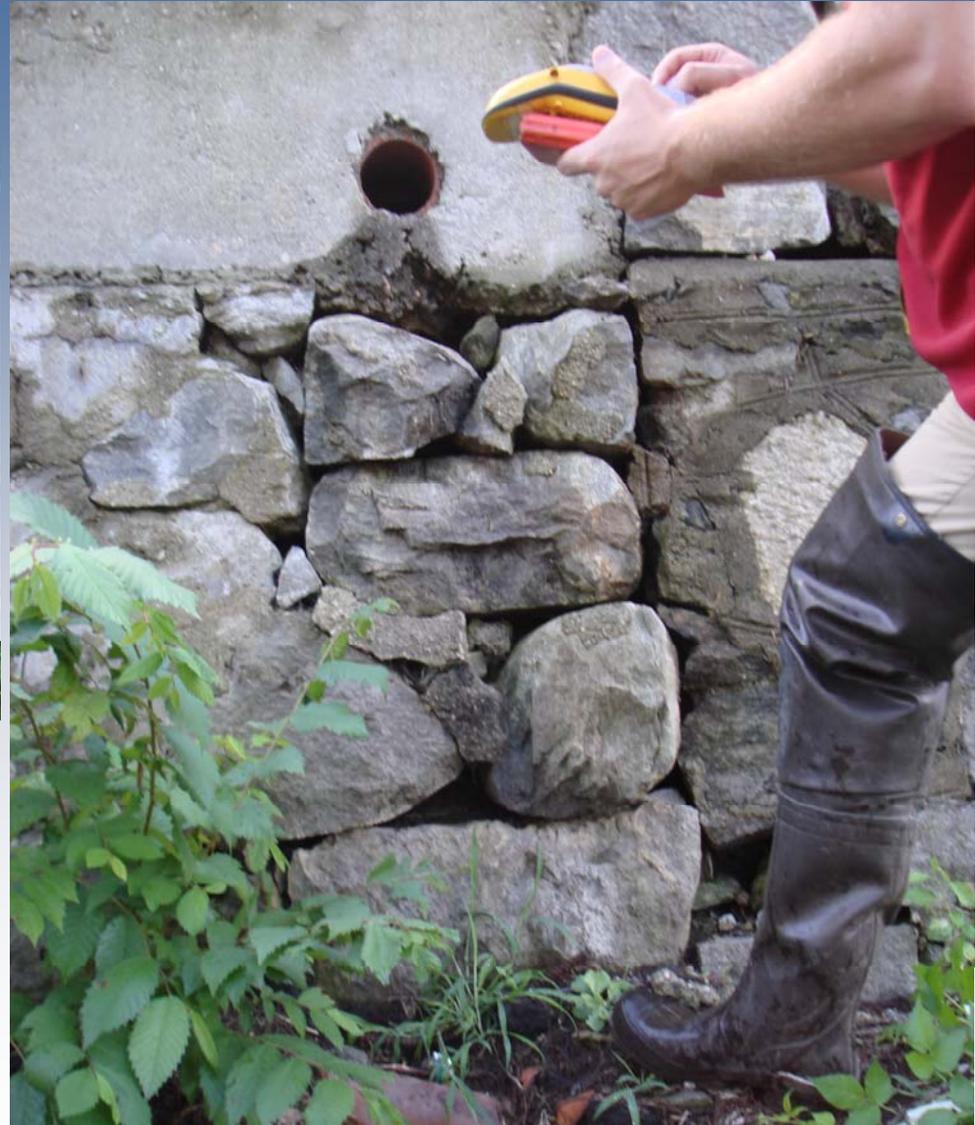
# TORRINGTON RESPONSE



# TORRINGTON RESPONSE



# TORRINGTON RESPONSE



# WHAT HASN'T BEEN DONE

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- **Vegetation Removal on Levees and Stream Banks**
- **Floodwall Repairs**
- **Levee Reconstruction**
- **Removal of Obstructions to River Flow  
(Including Vegetation and Accumulated Sediment)**



# CONSIDERATIONS MOVING FORWARD

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- Environmental Impacts
- Property Ownership and Easements - Walls, Levees, Areas of River Access
- Cost – Both Initial Capital Cost and Ongoing Maintenance Costs
- Regulatory Permitting
- Cost to Benefit Ratio



# OPTIONS

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1. Do nothing.
2. Fully comply with ACOE requirements.
3. Deauthorize the entire project.
4. Deauthorize a portion of the project and seek reactivation of remaining portion.



# DO NOTHING

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## ADVANTAGES

- Would require no effort and no funding.

## DISADVANTAGES

- Ignores federal requirements and process.
- ACOE cannot place project on inactive status indefinitely.



# FULLY COMPLY WITH REQUIREMENTS

## ADVANTAGES

- Project would attain active status.
- Future damages to flood control features (i.e. walls, levees) would be eligible for ACOE funding.
- FEMA floodplain status and insurance requirements should remain unchanged.

## DISADVANTAGES

- City does not own land on which improvements are needed.
- Significant impact to the ecological community of the river would occur.
- Costs for levee vegetation clearing likely to cost on the order of \$400,000 (proposed in FY-10 budget).
- Total costs could be much more.
- Protected properties may still be required to purchase flood insurance in the future.



# DEAUTHORIZE PROJECT

## ADVANTAGES

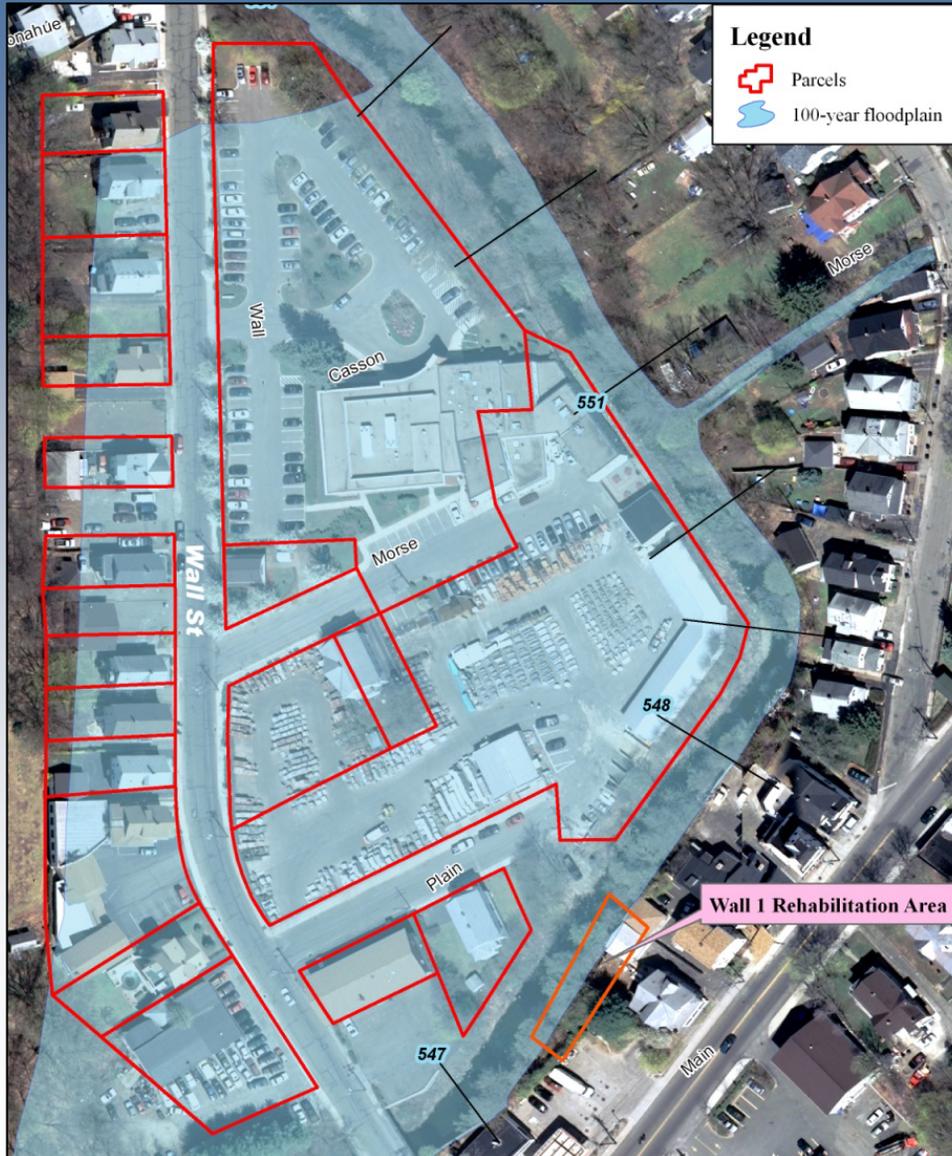
- Minimal impact to taxpayers for capital or ongoing maintenance.
- Ecological impacts would be avoided.
- Legal issues associated with land ownership would be avoided.

## DISADVANTAGES

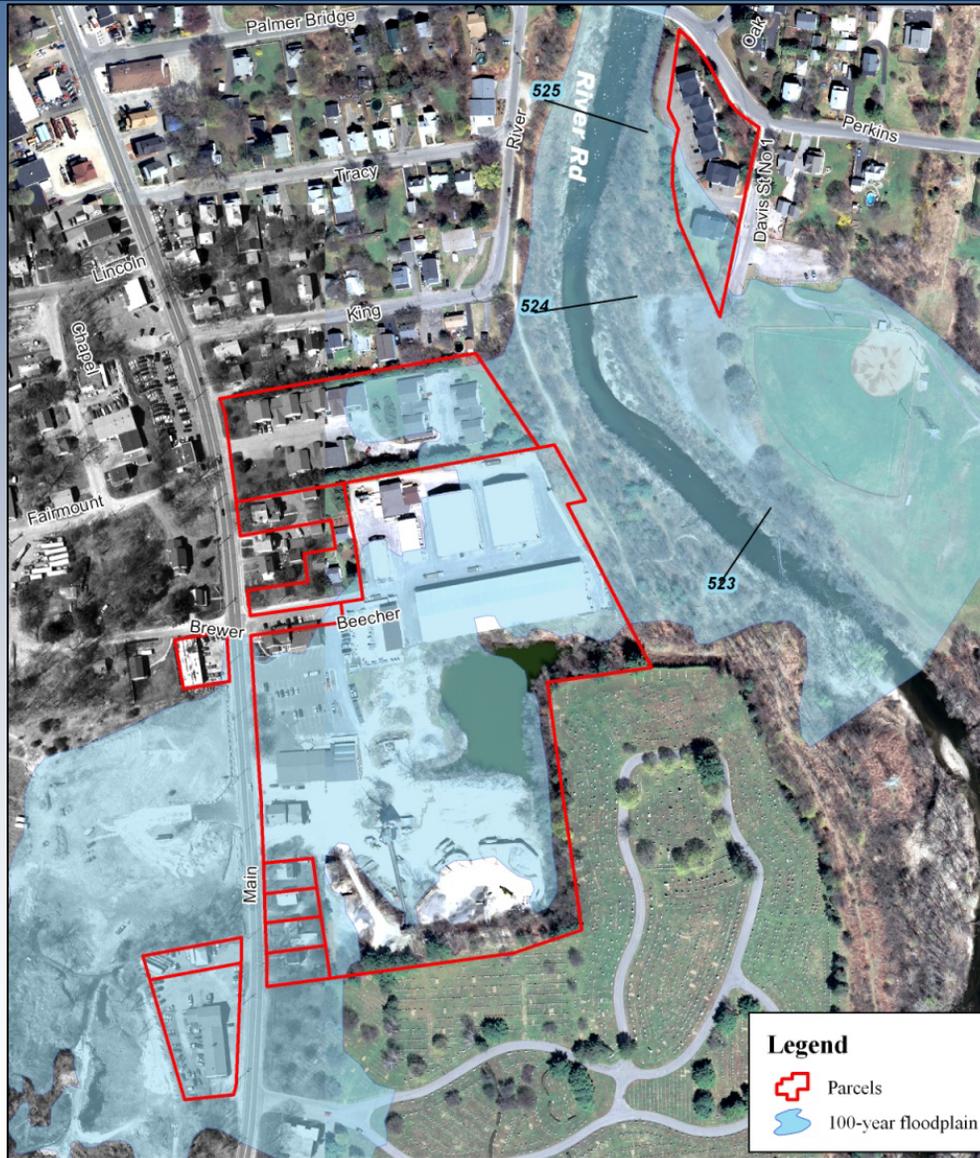
- 32 developed properties (11 on MS, 21 on EB) would potentially be flooded with 1 to 2 feet of water during the 100-year flood if a wall or levee failed or were overtopped.
- FEMA may delineate a larger floodplain area near Wall Street and South Main Street when Torrington is remapped.
- Damaged walls and levees would not be eligible for ACOE funding in the future.



# EAST BRANCH AFFECTED PARCELS



# MAIN STEM AFFECTED PARCELS



# DEAUTHORIZE A PORTION OF THE PROJECT

## ADVANTAGES

- East Branch of LFPP would continue to be protected.
- Ecological impacts would be avoided.
- Legal issues associated with land ownership would largely be avoided.

## DISADVANTAGES

- Approximately 11 developed properties d/s of Palmer Bridge Street could potentially be flooded with 1 to 2 feet of water during the 100-year flood.
- FEMA could include a larger area near South Main Street when Torrington is remapped.
- Damaged levees would not be eligible for ACOE funding in the future.
- Partial deauthorization may not be allowed.



# NEXT STEPS

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1. Understand the concerns of the community.
2. Make the best choice for Torrington.
3. Implement selected alternative.
4. If full or partial deauthorization is pursued, request from Torrington to federal congressional delegation would need to occur.
5. Proceed with regulatory requirements as appropriate to selected alternative.



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# Questions & Comments?

