



FEMA

# Levee Analysis and Mapping Procedures (LAMP) for Non-accredited Levees

Village of Endicott

Broome County, NY

July 27, 2016

**RiskMAP**

Increasing Resilience Together



# Agenda

- Welcome & Introductions
- Review of the Levee Analysis and Mapping Procedure (LAMP) Objectives
- Review of the area impacted by the local levee system
- Evaluate Components of the Levee System
- LAMP Path Forward

# Introductions & Contact Information

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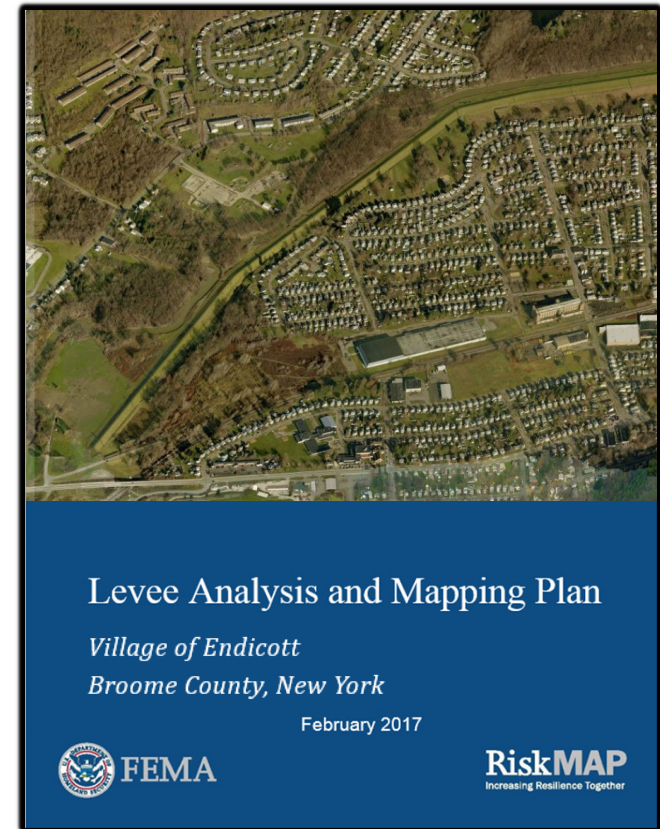
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# Levee Analysis and Mapping Process – Phase 1

## ■ LAMP Phase 1 Objectives

- Establish a Local Levee Partnership Team (LLPT) to collect local levee data and related levee system information
- Perform an approximate-level flooding analysis (First Pass Analysis)
- Prepare the Levee Analysis and Mapping Plan



# Local Levee Partnership Team (LLPT)

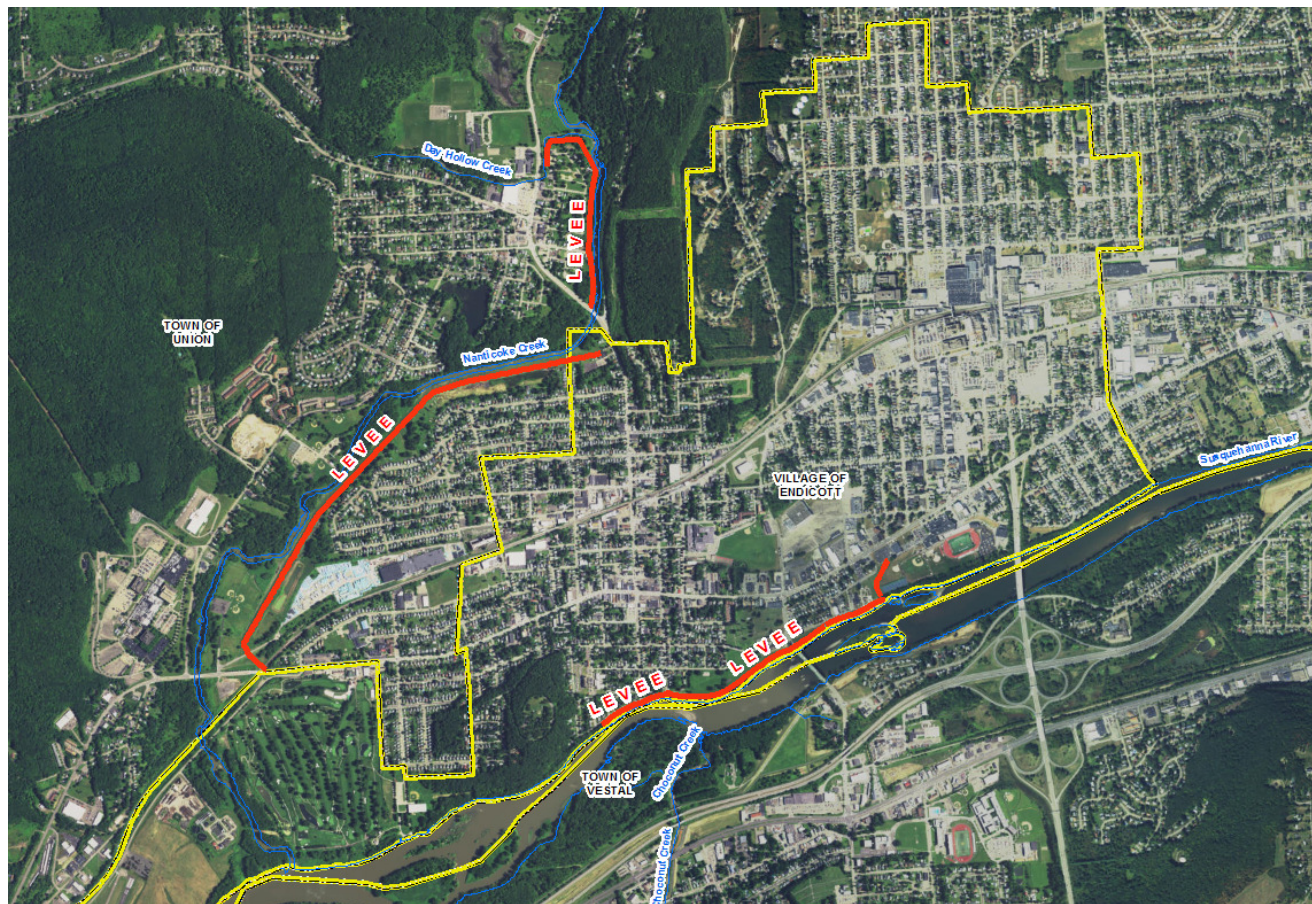
## ■ Meeting-Specific Objectives:

- Important information and data related to how the levee system will be analyzed and mapped is obtained and considered
- LLPT members identify unique conditions related to local levee system(s) that may impact analysis and mapping
- LLPT members comment on: levee system reaches, analyses, and mapping determinations within allowable guidelines
- A reasonable schedule is developed for obtaining input or additional data



# Local Levee Systems

- Village Of Endicott

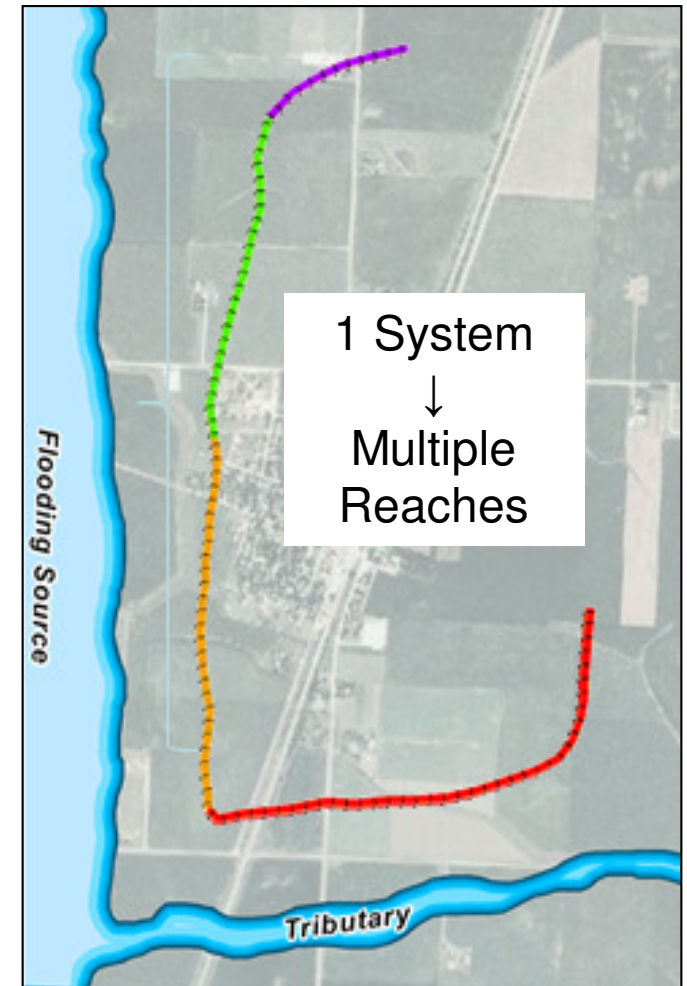


# LAMP Analyses & Methodology

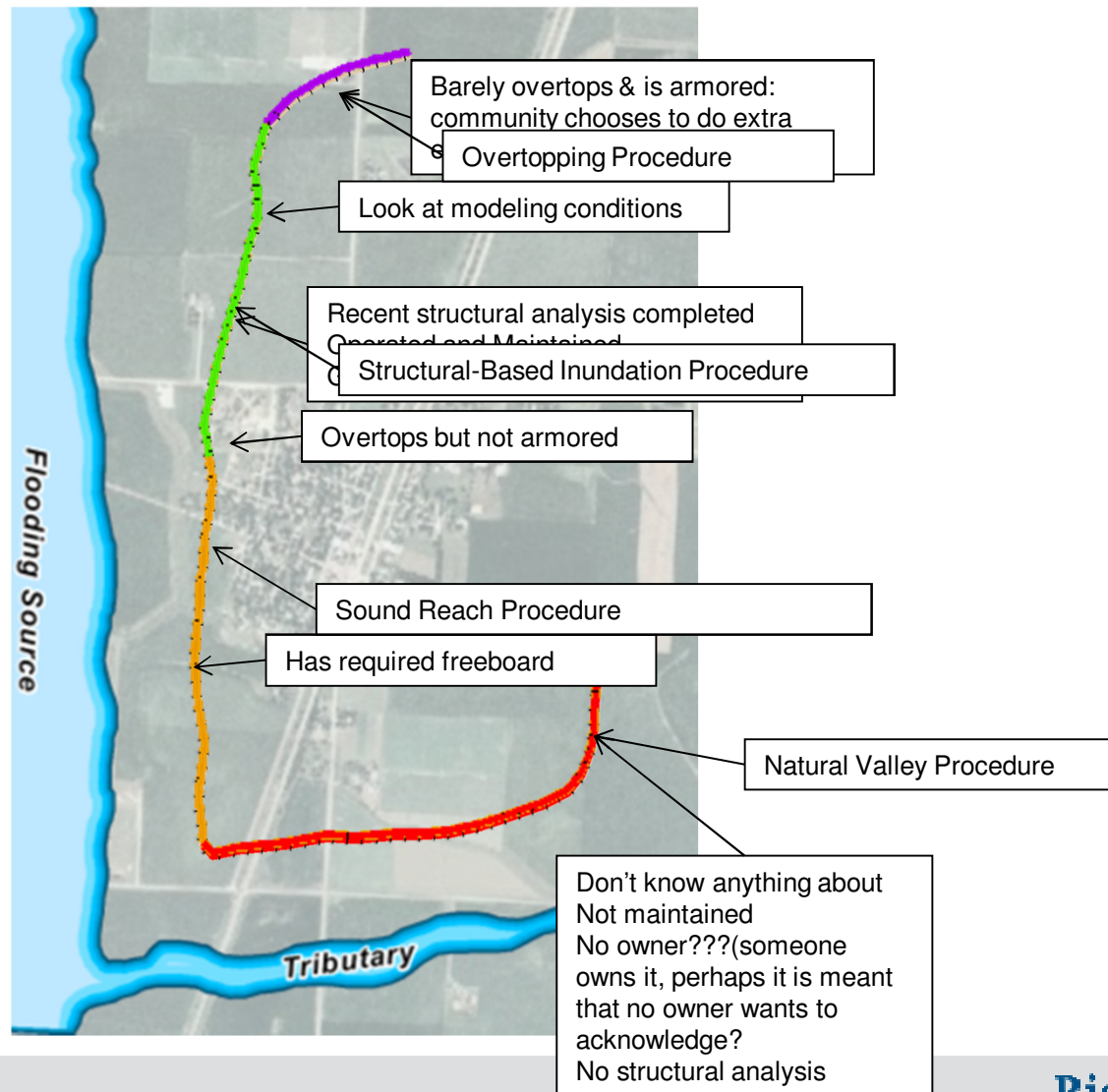
There are five procedures detailed in the LAMP Final Approach Document.

- **Natural Valley**
- **Structural-Based Inundation**
- **Overtopping**
- **Freeboard Deficient**
- **Sound Reach**

A levee system can be broken up into multiple reaches in order to analyze the flood risk in its vicinity.



# So... What's a Reach?





# Data Requirements

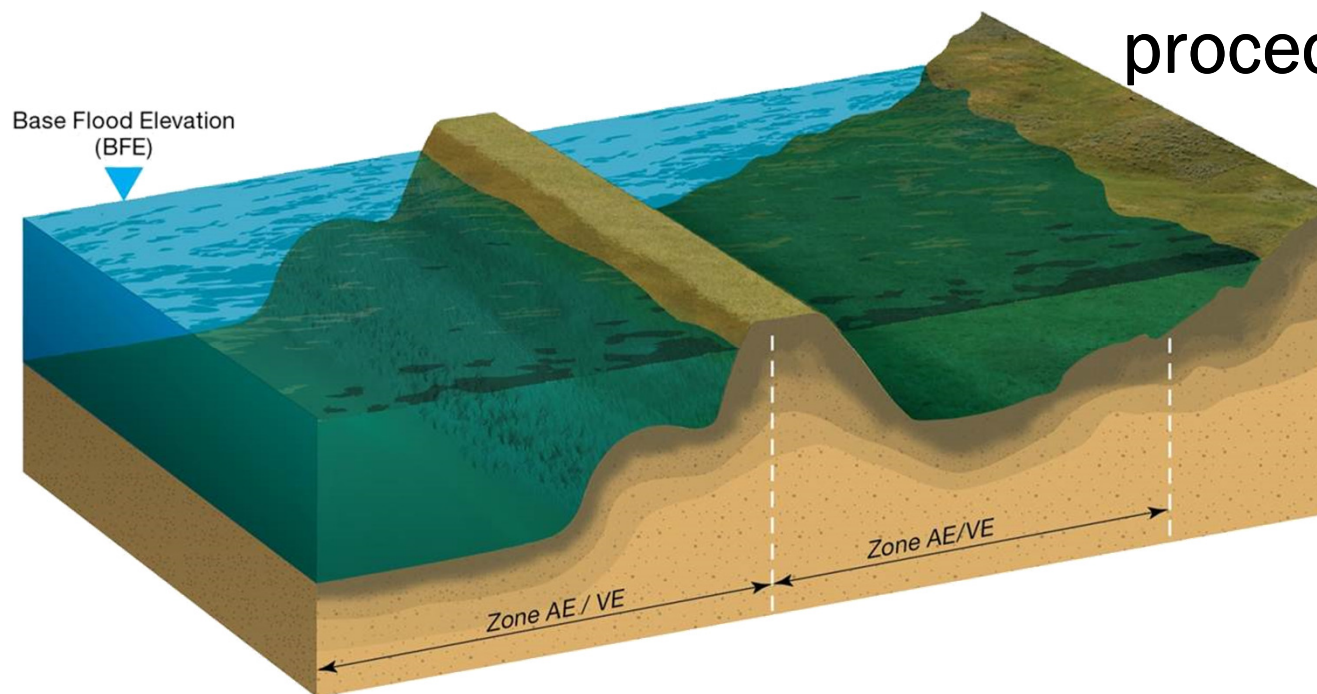
	Natural Valley	Structural-Based Inundation	Overtopping Approach	Freeboard Deficient	Sound Reach
Elevation Information for the Levee Crest	-	Required	Required	Required	Required
Operations and Maintenance Plan	-	Recommended	Required	Required	Required
Structural Design Requirements	-	Recommended	Required	Required	Required
Inspection Reports	-	Recommended	Required	Required	Required
Evaluation of Overtopping Erosion Potential	-	-	Required	-	-
BFE Less than Levee Crest	-	-	-	Required	Required
BFE + Freeboard Less than Levee Crest	-	-	-	-	Required

# Application of LAMP to Levees in COMMUNITY

- LLPT discussions on applicable LAMP Procedure
  - **Natural Valley Procedure**
    - Mapping natural floodplain of the flood source
  - **Structural Based Inundation Procedure**
    - Is there historical evidence that this levee has been breached in the past?
    - Is there evidence that finds this levee system vulnerable to breaching?
  - **Overtopping Procedure**
    - Is any “reach” a floodwall or levee designed to be overtopped in 1% storm?
  - **Freeboard Deficient Procedure**
    - Does any “reach” of the levee system meet all 44CFR 65.10 levee accreditation requirements except freeboard
  - **Sound Reach Procedure**
    - Does any “reach” of the levee system meet all 44CFR 65.10 levee accreditation requirements except that it is attached to “reaches” that cannot be accredited

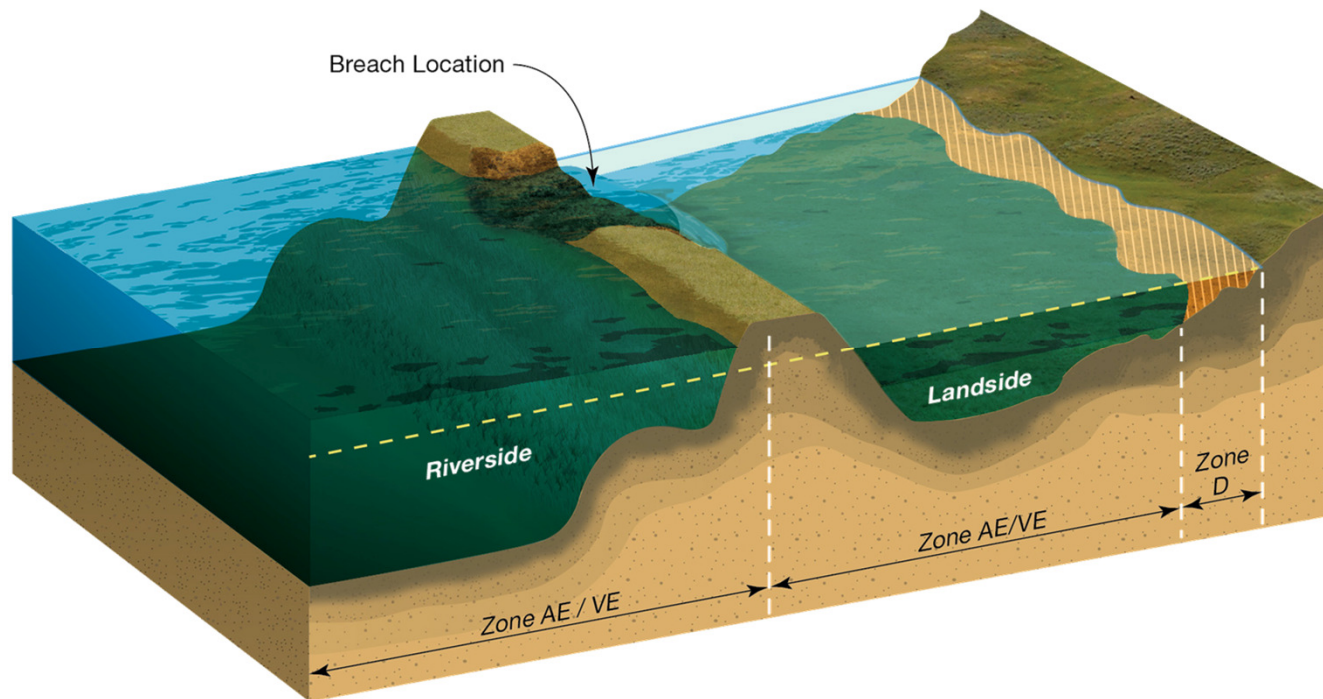
# Natural Valley Procedure

- Used to determine Zone D in subsequent procedures

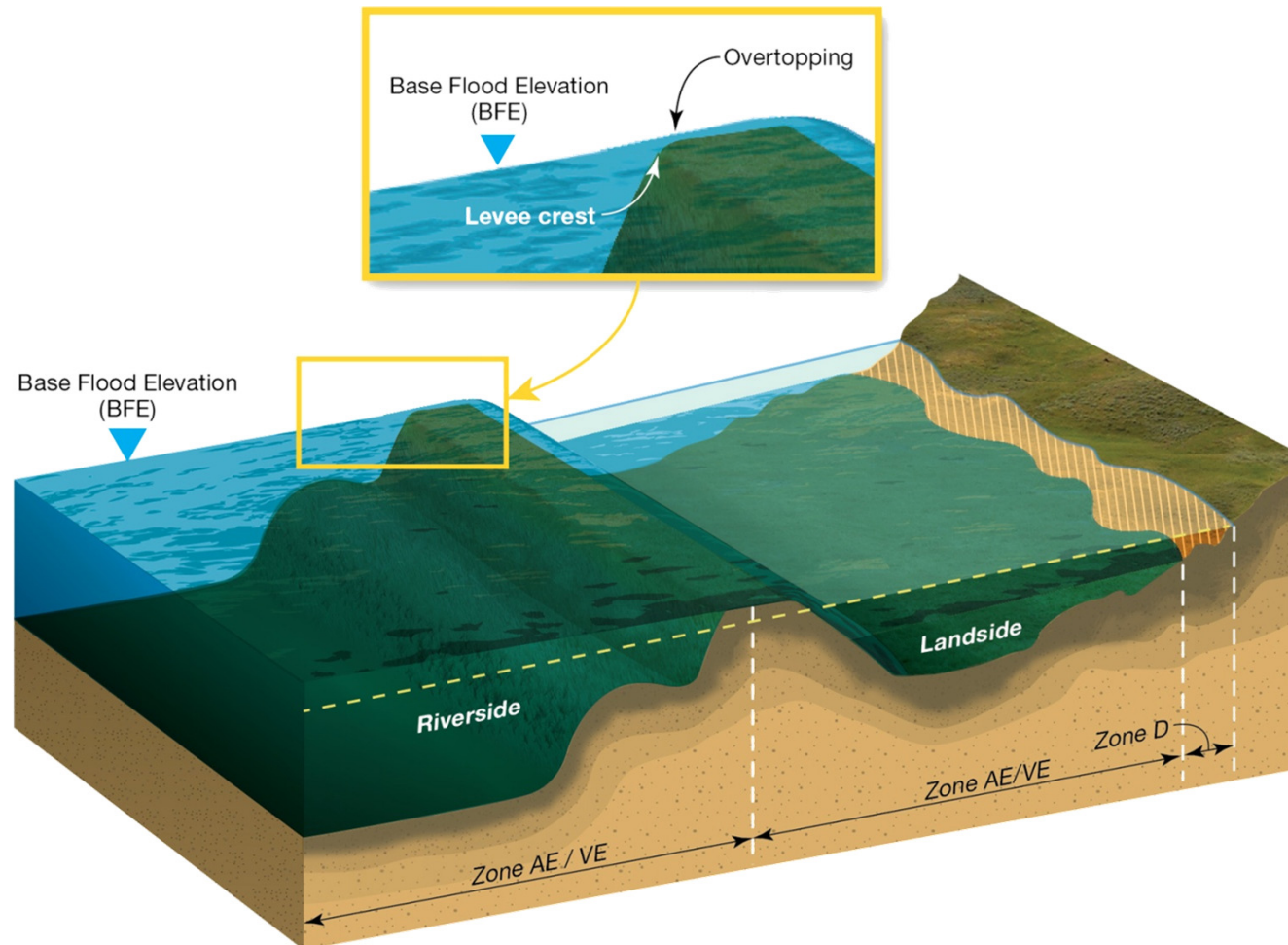


# Structural-Based Inundation Procedure

- Levee has history or potential for breaches



# Overtopping Procedure

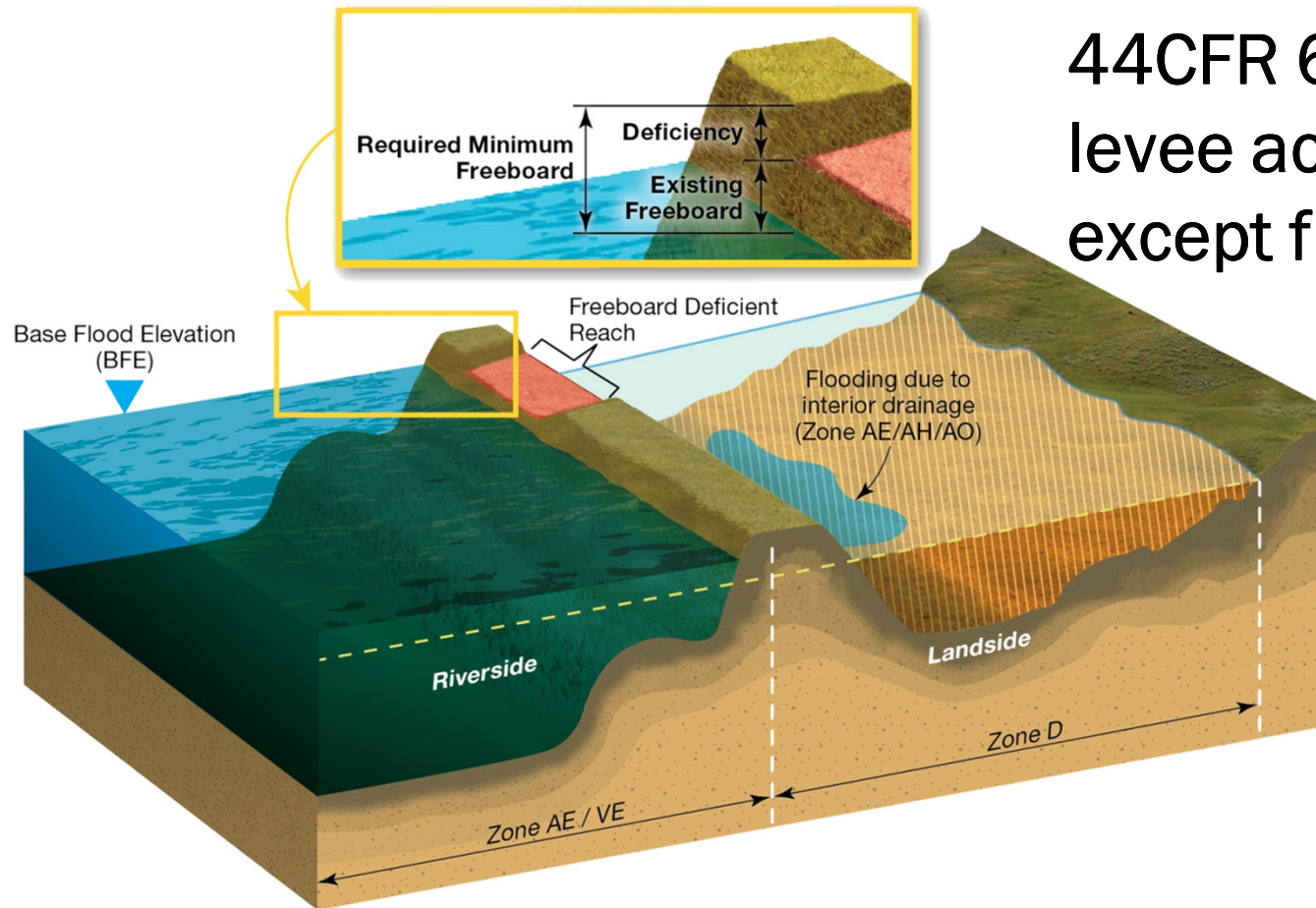


- Reach meets 44CFR 65.10 levee accreditation except freeboard
- Levee designed to be overtopped in 1% storm with no erosion



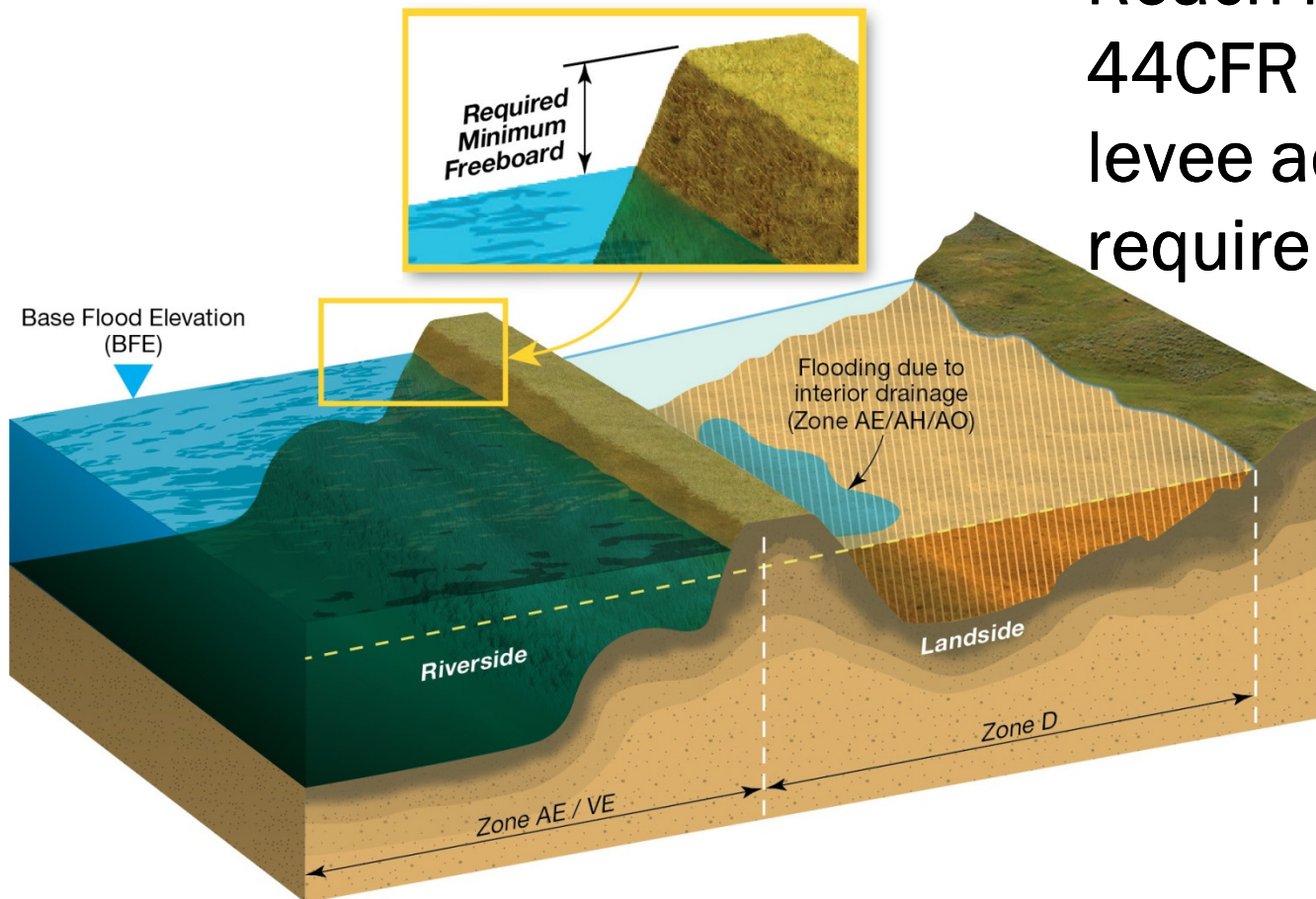
# Freeboard Deficient Procedure

- Reach meets 44CFR 65.10 levee accreditation except freeboard



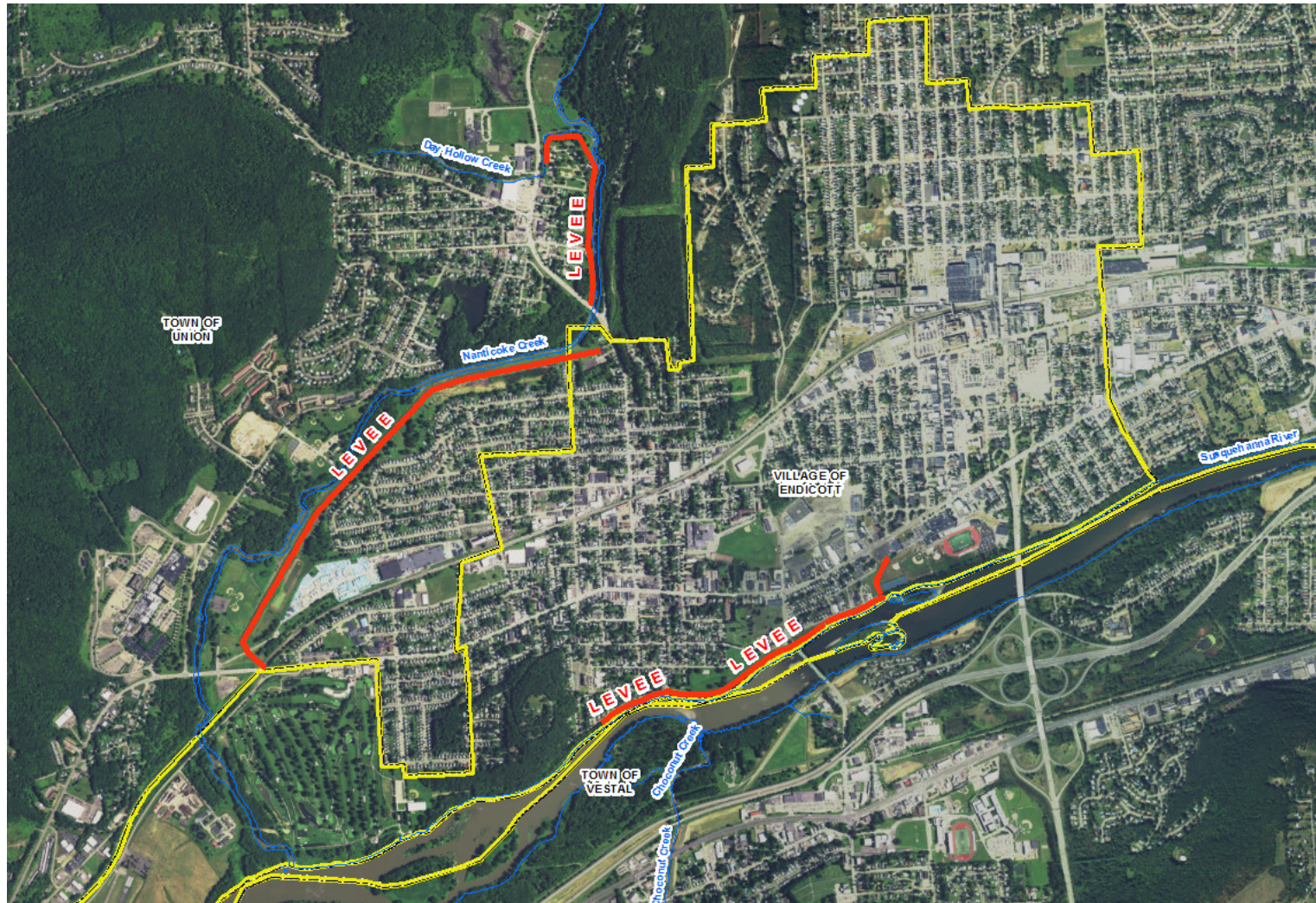
# Sound Reach Procedure

- Reach meets 44CFR 65.10 levee accreditation requirements



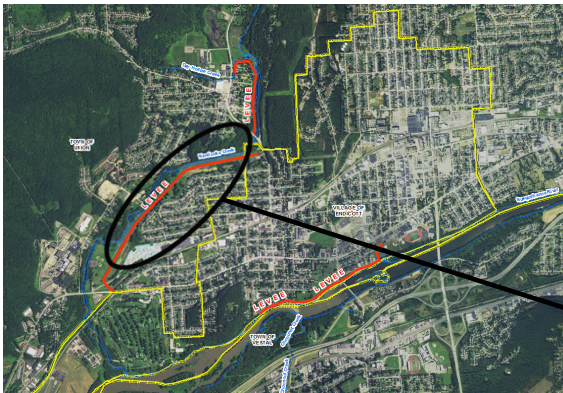


# Local Levee System



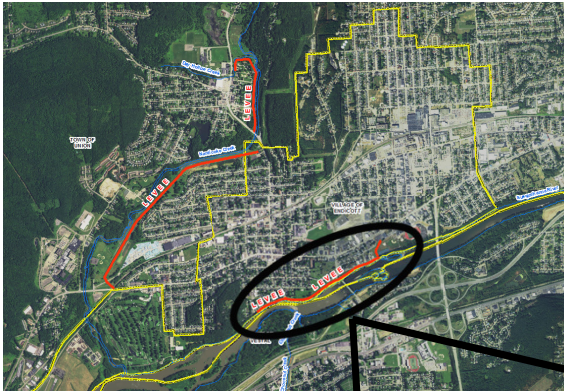


# Local Levee System





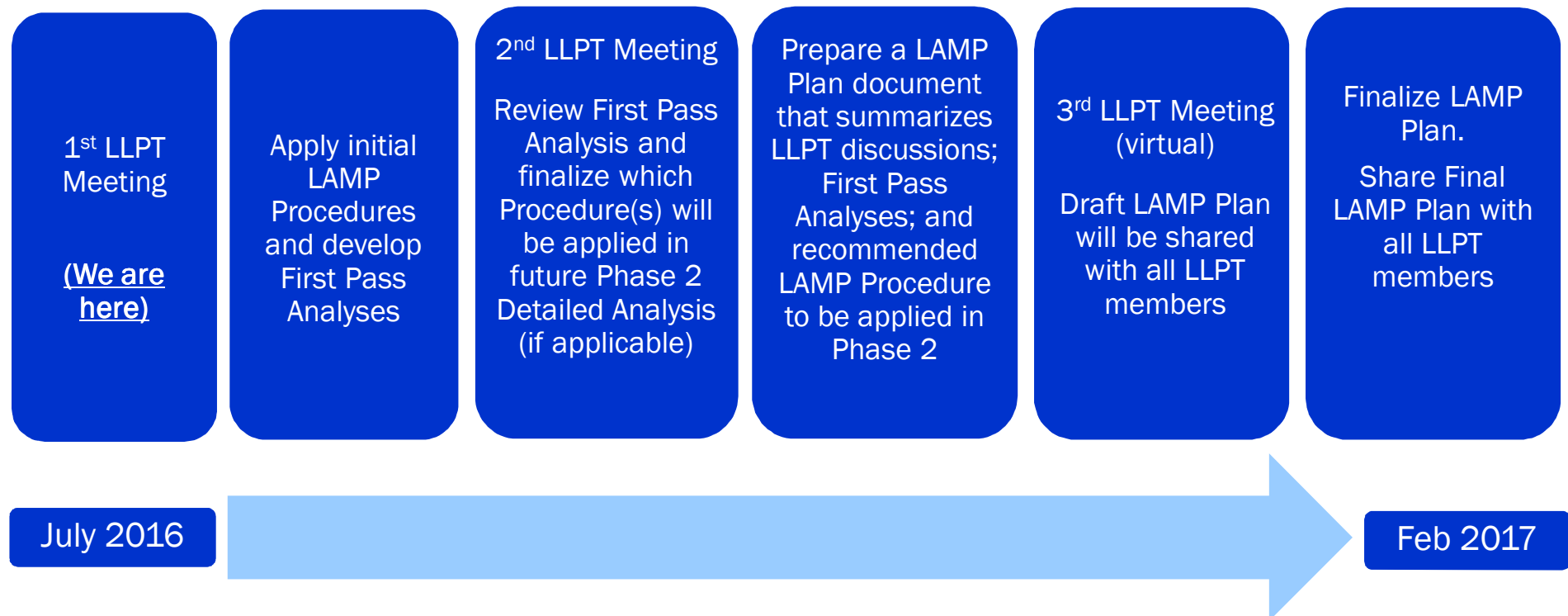
# Local Levee System





# LAMP Path Forward

## ■ LAMP - Phase 1

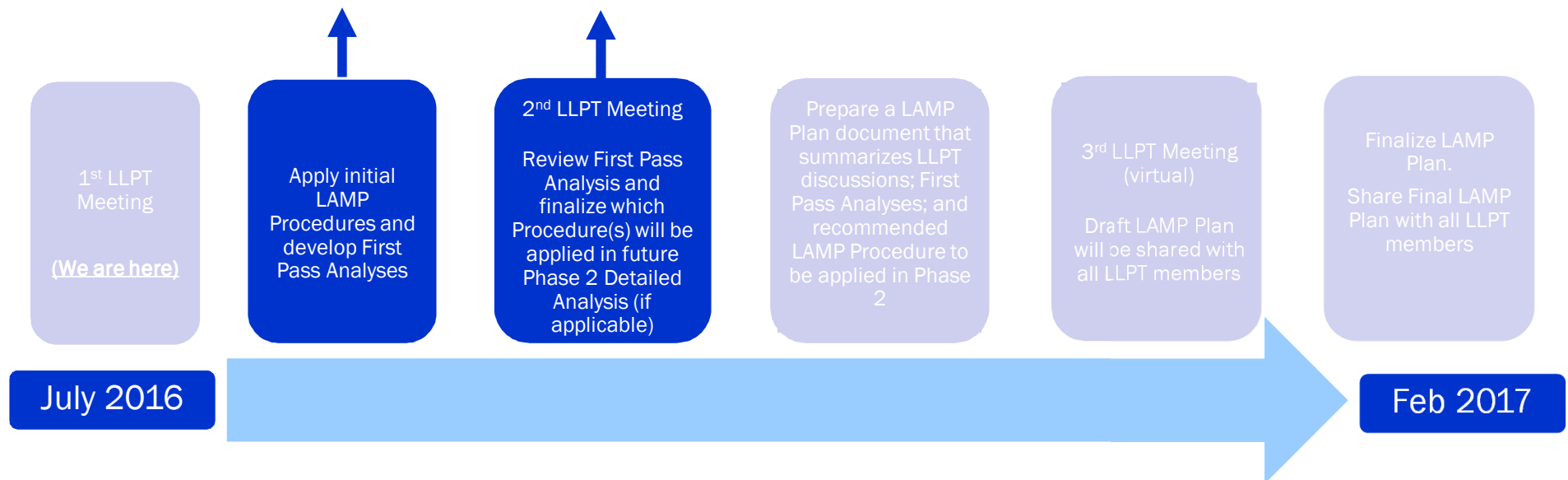


# LAMP: Next Step

## ■ Preparing for Phase 2

Collect Data, Develop Models for First Pass Analysis

Schedule LLPT2 Meeting, Review First Pass Analysis, Finalize Procedures





# FEMA

*Know, plan for, mitigate against and communicate  
about the risks in your community.*