

AGENDA

- **6:00 : Doors Open**
- **6:15 : Presentation**
- **6:30-8:00: Open House**

KING COUNTY & INCORPORATED AREAS FLOOD STUDY OPEN HOUSE



JANUARY 27, 2011



FEMA

King County Revised Flood Insurance Study (RFIS)

- **Background of the National Flood Insurance Program**
- **Restudy Areas**
- **How a Floodway is Determined**
- **Levee Methodology**
- **Process and Schedule**

NATIONAL FLOOD INSURANCE PROGRAM

Purpose – To reduce economic loss caused by flood events

- **Maps the flood risk and assign insurance rates (FIRMs)**
- **Makes flood insurance available**
- **Sets minimum floodplain construction standards**
- **Reduces dependency on structural flood control**
- **Promotes floodplain management practices**

HOW THE NFIP WORKS

Three disciplines of the NFIP:

- **Mapping – Flood Studies**
- **Regulations**
- **Insurance**



KING COUNTY FLOOD STUDY DETAILS

COOPERATING
TECHNICAL PARTNERSHIP:
KING COUNTY

FEMA CONTRACTOR:
MICHAEL BAKER JR., INC.



NEW/UPDATED FLOOD HAZARDS: DETAILED STUDIES (ZONE AE)

Flooding Source

Lower Green River

Middle Green River

Black River

Springbrook Creek

Mill Creek

SW 23rd Street Drainage Canal

Cedar River

Kelsey Creek

West Tributary Kelsey Creek

Reach

RM 3.85 to Hwy 18 Bridge

Hwy 18 Bridge to Upstream End of
Flaming Geyser Park

Green River to 330 ft DS of Oaksdale Ave SW

Black River Pump Station to 0.32 mi. US of S 228th St

Springbrook Creek to 1500 ft US of Hwy 167

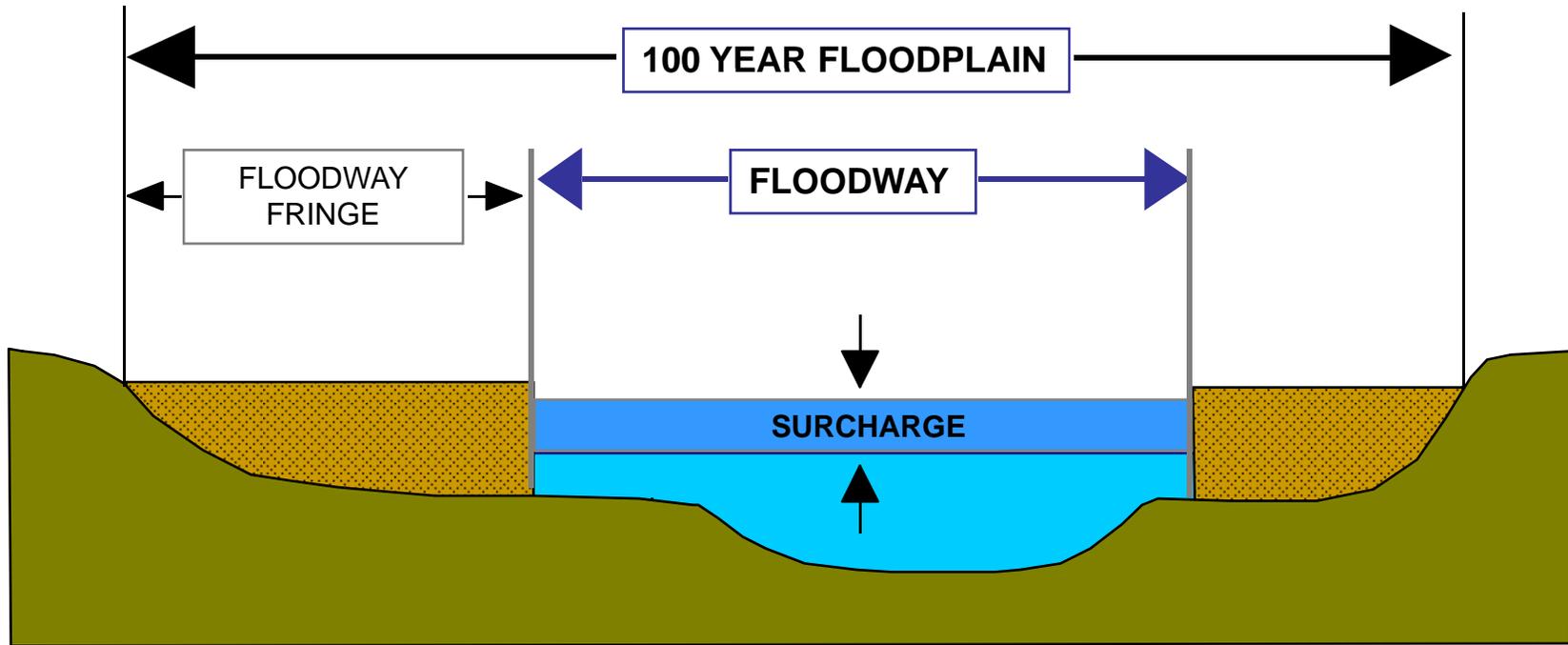
Springbrook Creek to 170 ft US of East Valley Road

Lake Washington to 350 ft US of Landsburg Road SE

I-405 to NE 8th Street

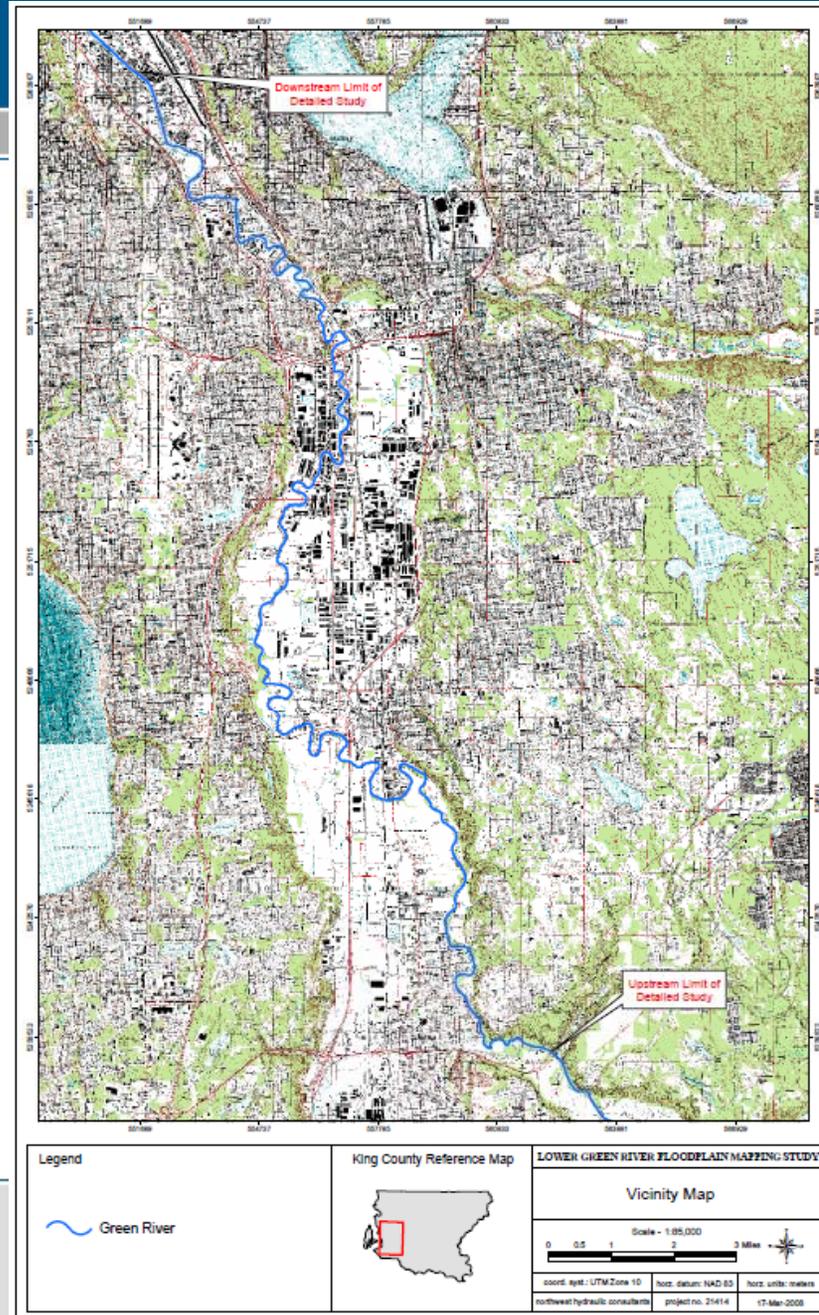
Kelsey Creek to 320 ft DS of NE 1st Street

Floodway Schematic



FLOODWAY + FLOODWAY FRINGE = 100 YEAR FLOODPLAIN
SURCHARGE NOT TO EXCEED 1.0 FEET

GREEN RIVER SCOPE OF WORK



Legend

 Green River

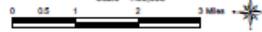
King County Reference Map



LOWER GREEN RIVER FLOODPLAIN MAPPING STUDY

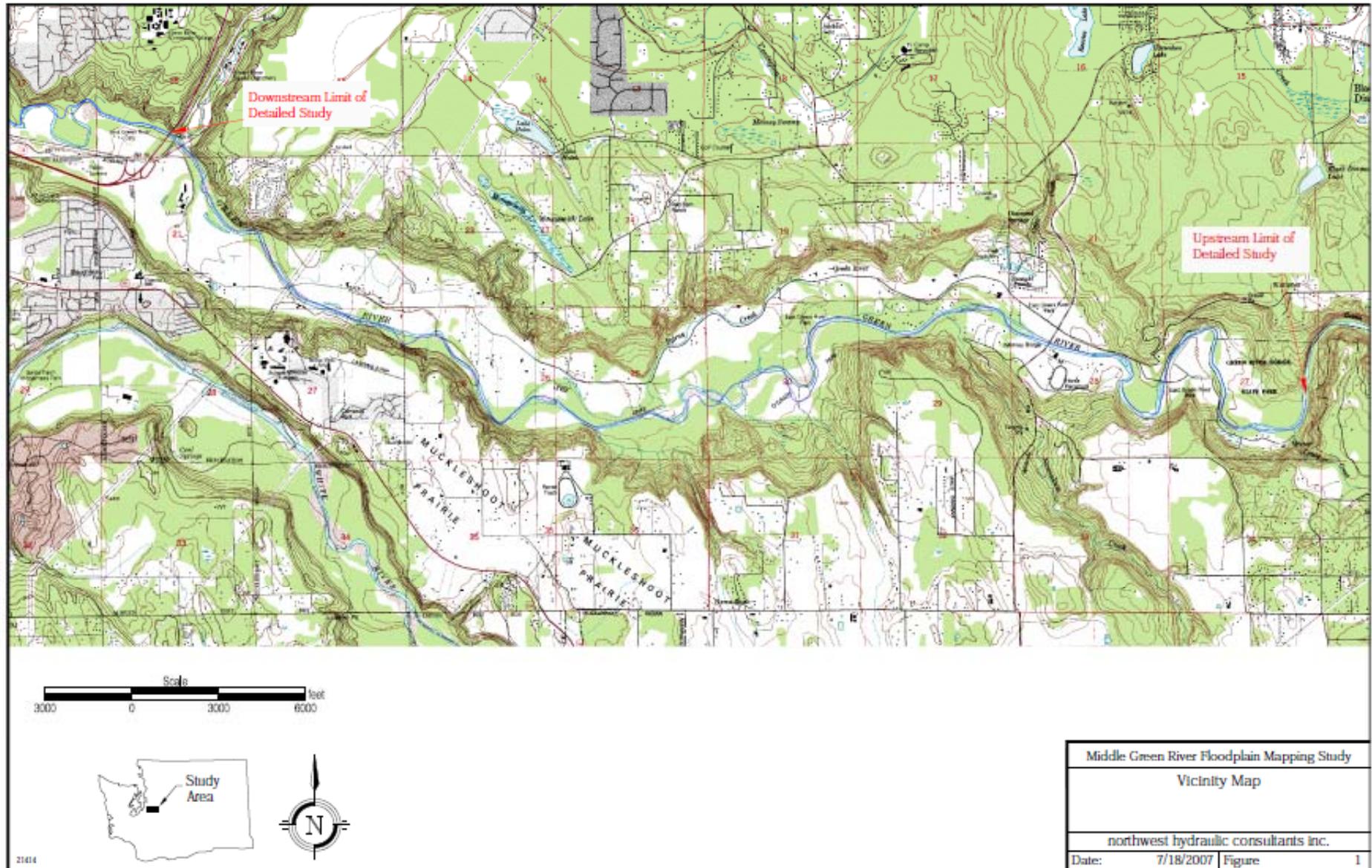
Vicinity Map

Scale - 1:85,000



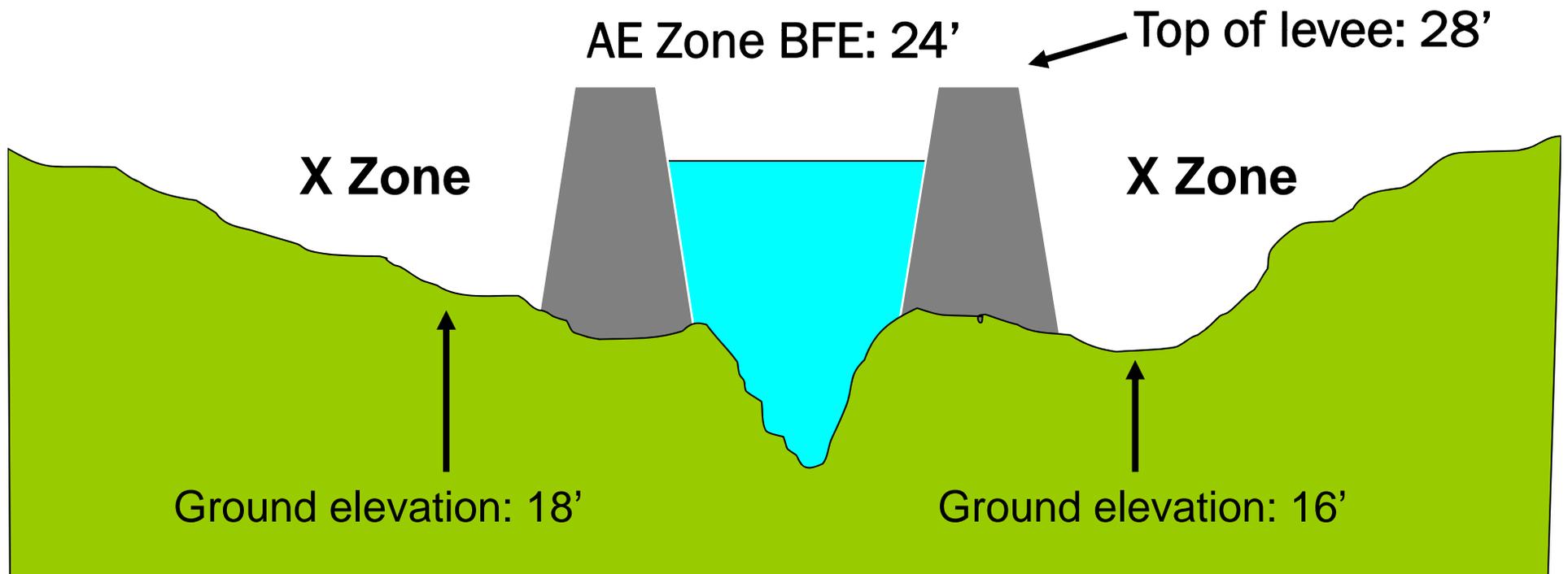
coord. syst.: UTM Zone 18
horiz. datum: NAD 83
horiz. units: meters
northwest hydraulic consultants project no. 21414 17-Mar-2008

GREEN RIVER SCOPE OF WORK

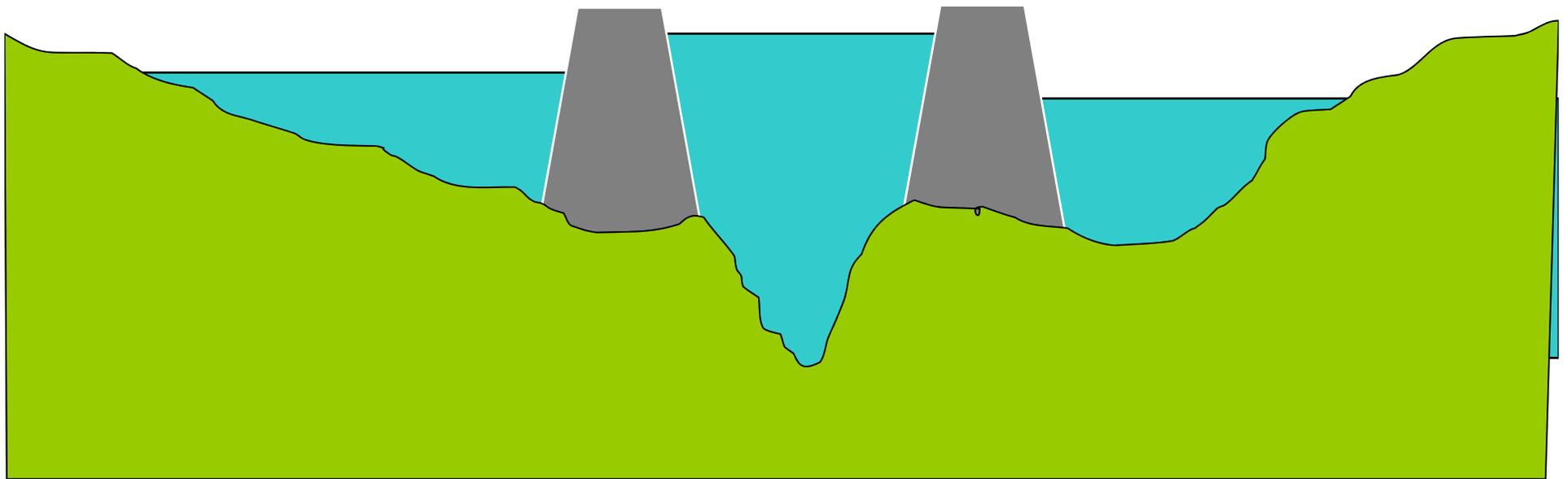


IS THE LEVEE ACCREDITED?

- Levees must meet standards identified at 44 CFR 65.10
- Based on FEMA Guidelines and Specifications for mapping
- Original interim levee policy: May 15, 1981



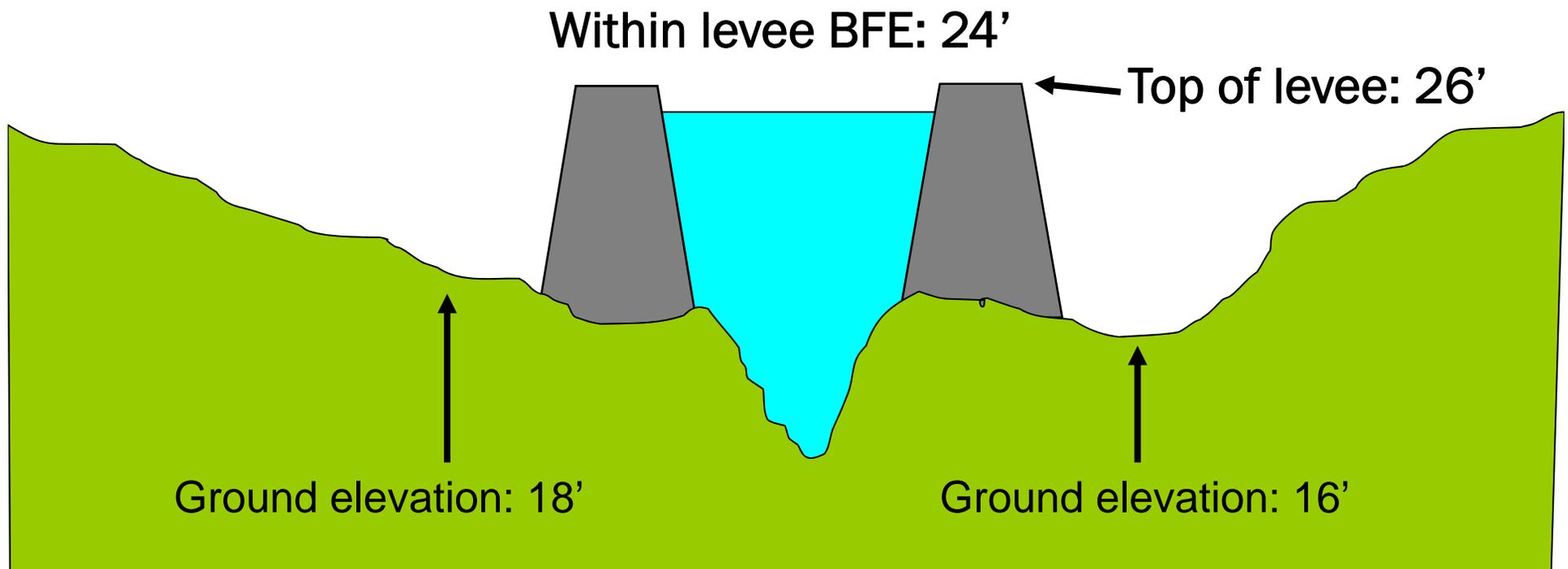
HOW DOES FEMA USUALLY MODEL LEVEES?



BASELINE:

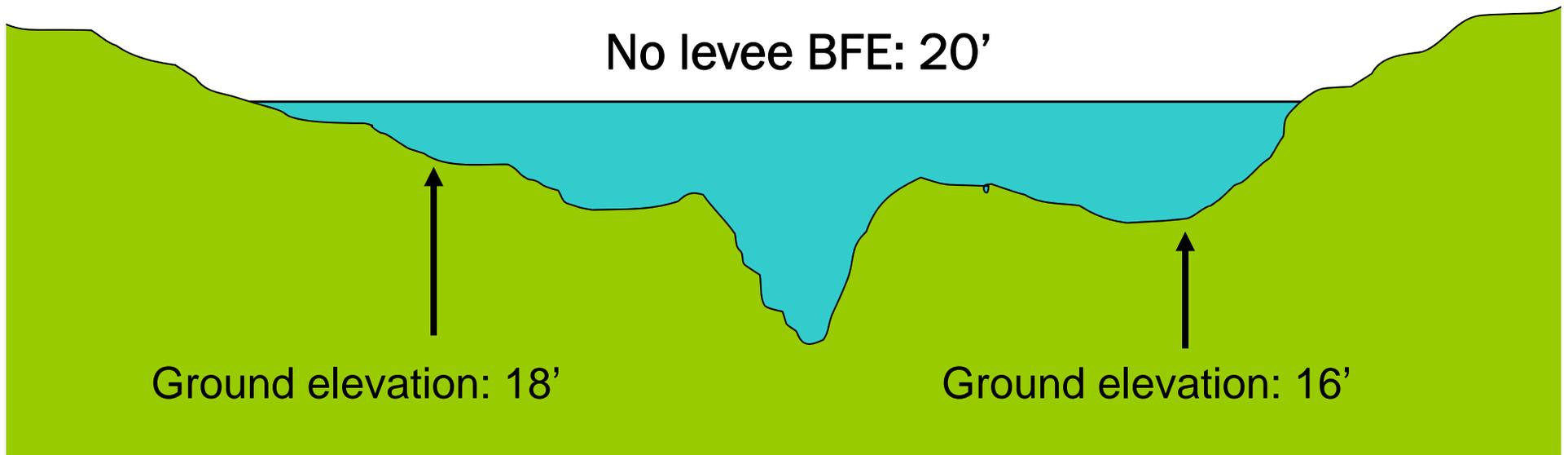
DO THE LEVEES HAVE ENOUGH FREEBOARD?

- Compare the height of levee to the BFE: Is there 3' of freeboard? Does it have a current maintenance plan?
- If not...



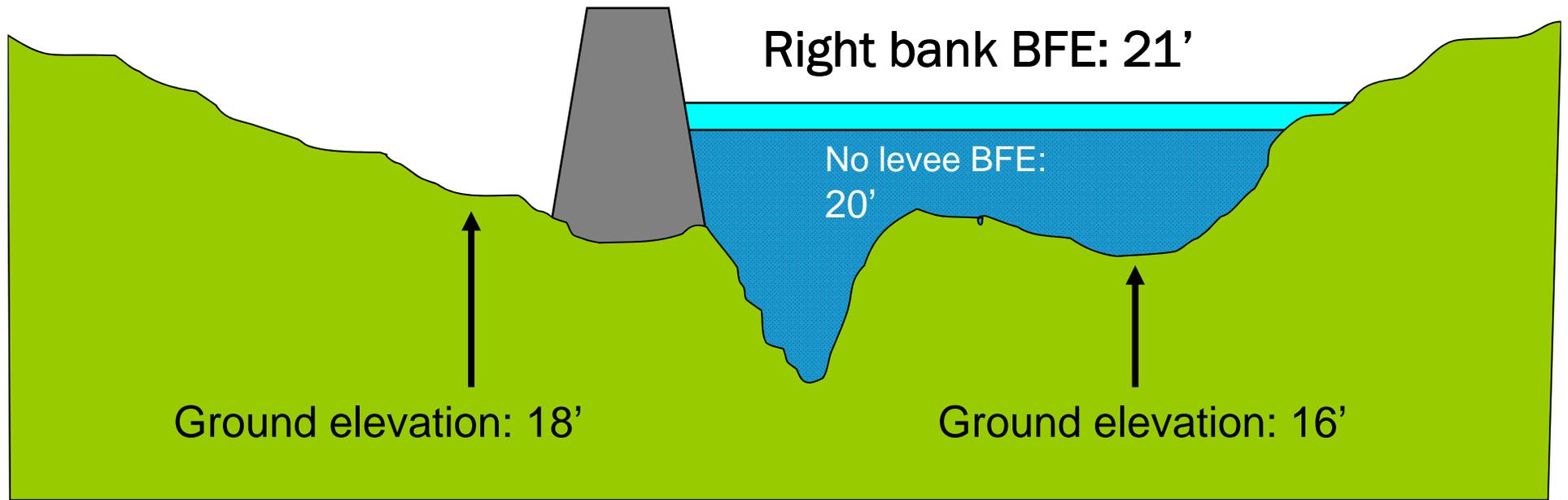
SCENARIO 1: ASSUME NO LEVEES EXIST

- Establishes a baseline for comparison
- Used for calculating the Floodway
- Provides lowest BFEs



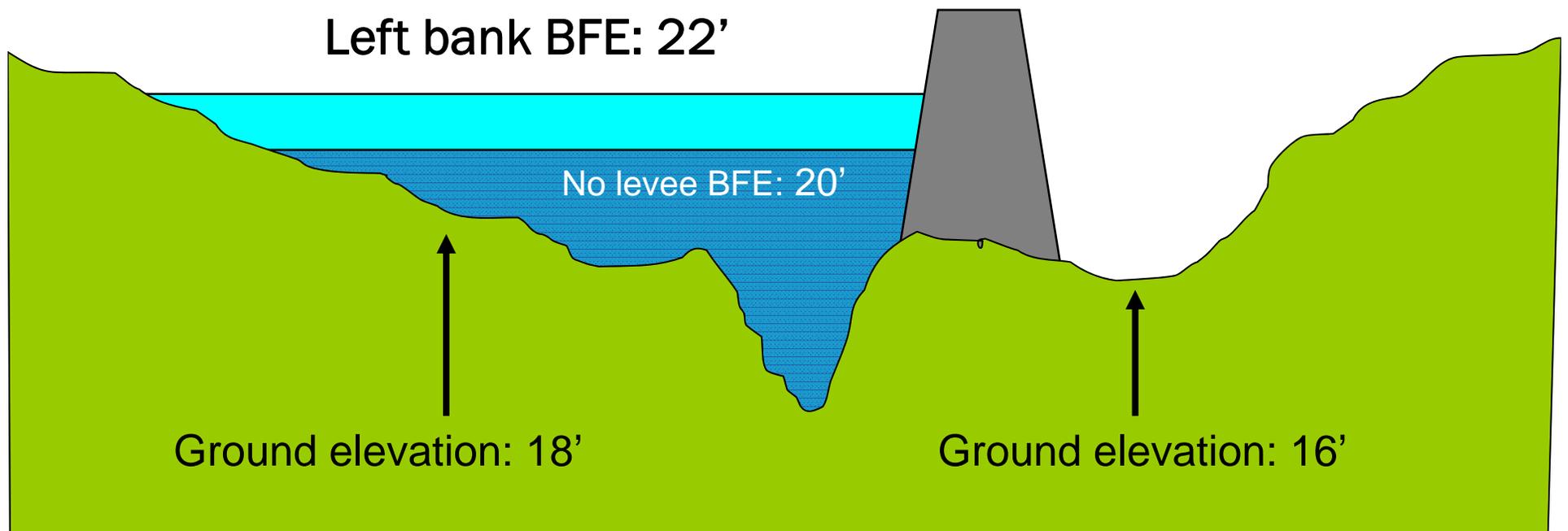
SCENARIO 2: SIMULATE RIGHT BANK LEVEE FAILURE

This determines the BFE on the right bank (behind levee)



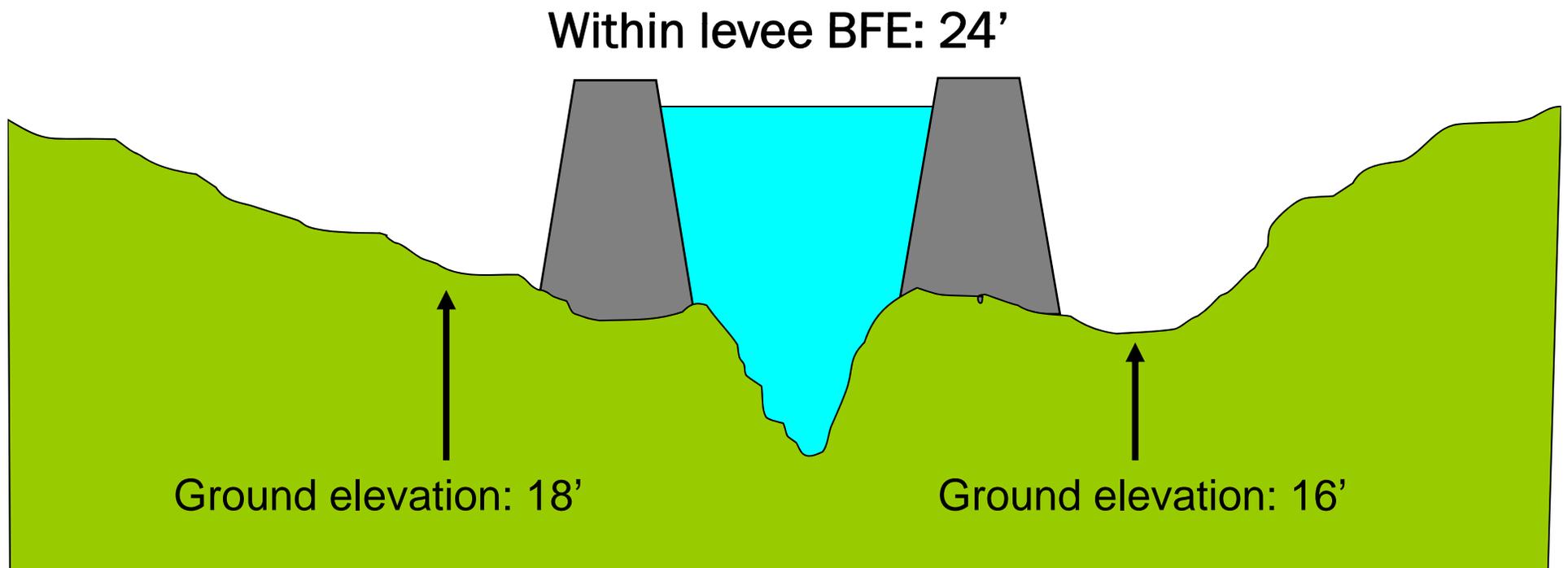
SCENARIO 3: SIMULATE LEFT BANK LEVEE FAILURE

- This determines the BFE on the left bank (behind levee)



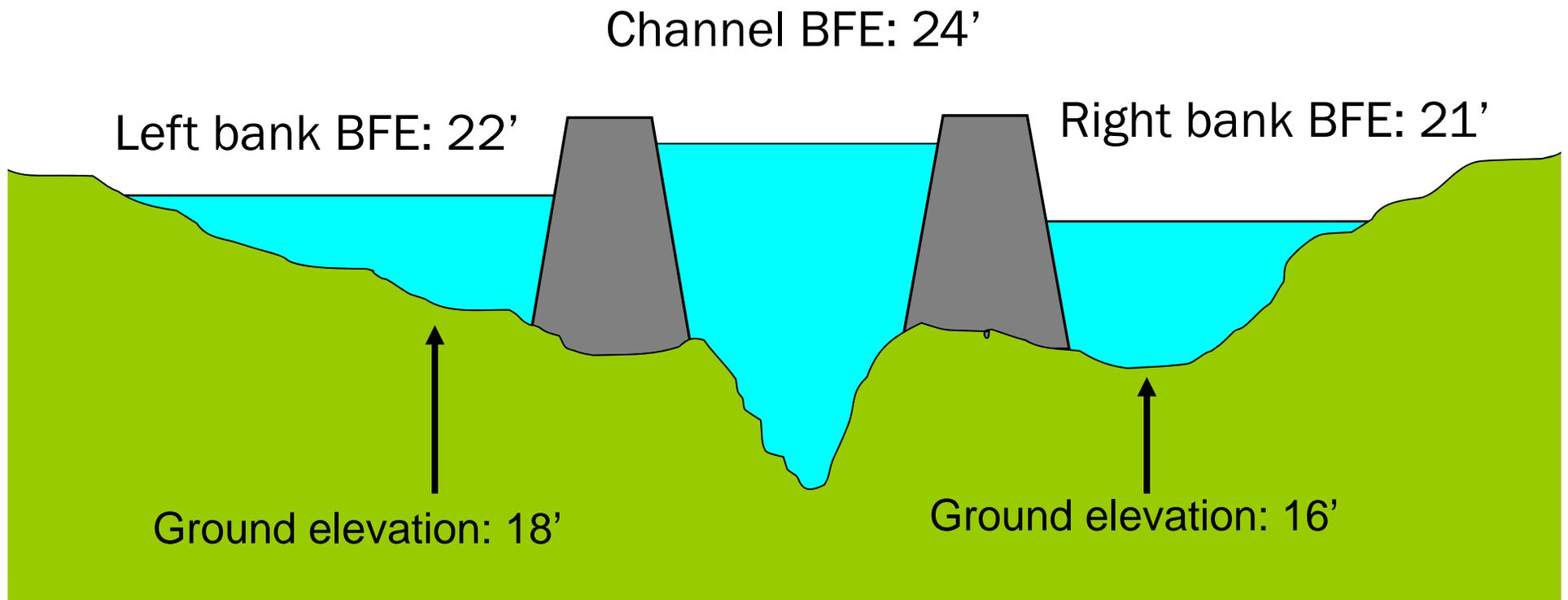
SCENARIO 4: SIMULATE NO LEVEE FAILURES

- Determines the BFE within the levee
- Indicates insufficient freeboard?



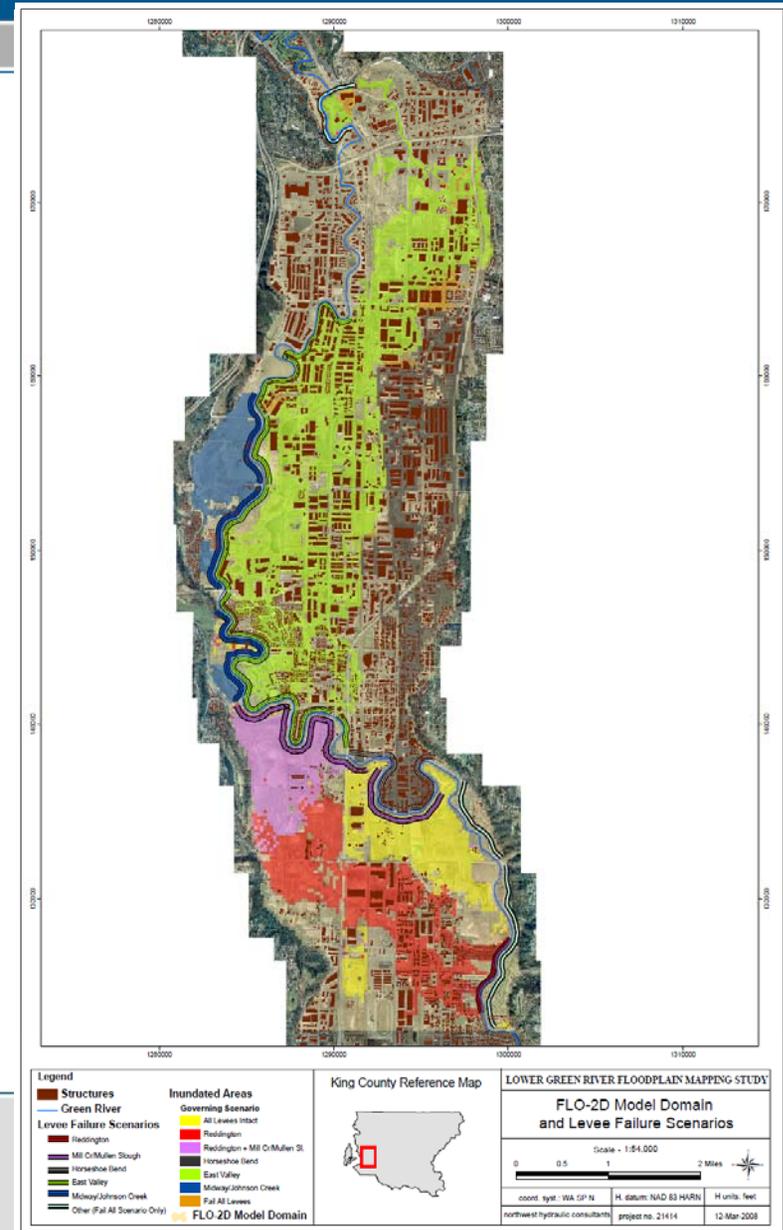
MAPPING: COMBINE THE RESULTS — ASSIGN RISK ZONE & ASSIGN BFE

- Final BFE shown reflects what would occur when a levee fails by factoring in the unknown of where the levee will fail



GREEN RIVER SCOPE OF WORK

- Reddington
- Reddington & Mill Creek/Mullen Street
- Horseshoe Bend
- East Valley
- Midway/Johnson Creek
- Fail All Levees
- All Levees Intact



KING COUNTY ADOPTION PROCESS



PROCESS & SCHEDULE

- **90 Day Appeal Period ~ March 1?**
 - Appeals must be submitted by Community
- **Appeal Resolution ~60 days (+/-)**
- **Letter of Final Determination (LFD)~ August 2011**
- **6 Month Adoption Period**

LETTERS OF MAP CHANGE (LOMC) (WAYS TO APPEAL AT ANY TIME)

- **LOMA** - for property owners who believe a property was incorrectly included in a SFHA. An elevation certificate supports a LOMA, but by itself, does not remove the insurance requirement.
- **LOMR** – removes land that has been graded or filled (physical changes) since the date of the map. A LOMR can waive flood insurance requirements.
- **(LOMA) Hotline - 1-877-FEMA-MAP**

INFORMATION TABLES

Flood Insurance

**Flood Study /
Engineering**

**Property
Identification &
Digital Mapping**

King County

City Tables

**Floodplain
Regulations**

FLOOD INSURANCE TABLE

- **When is flood insurance required?**
- **What is the flood insurance rate structure for the zone one is in (AE, A, AO, AH, V, VE, Shaded X, unshaded X)?**
- **What are my best options to get the lowest rate?**

FLOOD STUDY/ENGINEERING TABLE

- How was a 1% (100-year) flow derived?
- How does one determine how deep and wide the river gets for a 1% flood?
- How is a floodway derived?
- What rivers were updated?
- What information was used (topography, high water marks, stream gages)?
- What is the process to appeal the information and/or provide better information?

PROPERTY IDENTIFICATION AND DIGITAL MAPPING TABLE

- **Determining if one is in a Flood Zone**
- **If yes, what type of flood zone is one in (AE, A, AO, AH, V, VE, Shaded X, unshaded X)**
- **Is the property in a floodway?**
- **Ability to add layers to help better locate a property (orthophotos, parcel data)**
- **Print a map of your property and the flood zone**
- **Where one should go next for more information (Insurance, Floodplain Regulations)**

FLOODPLAIN REGULATIONS TABLE

- **What are the building requirements/restrictions for the zone one is in (AE, A, AO, AH, V, VE, Shaded X, unshaded X)**
- **What are the building requirements/restrictions for a floodway?**

KING COUNTY TABLE

- **Floodplain Regulations**
- **Determining if one is in a Flood Zone**
- **Emergency Management Capabilities**
- **Hazard Mitigation Plans**

CITY TABLES

- **Floodplain Regulations**
- **Emergency Management Capabilities**
- **Locally Available Hazard Mitigation Plans**

APPEALS & COMMENTS

- **Submit to your community officials**
 - **City of Renton**
Ronald J. Straka P.E., Utility Engineering Supervisor, City of Renton Surface Water Utility, Renton City Hall -5th Floor
1055 South Grady Way Renton, WA 98057
 - **Unincorporated King County**
Steve Bleifuhs, Manager, River and Floodplain Management Section
201 S Jackson St. Suite 600 Seattle, WA 98104
- **Community bundles all the comments and forwards them to Region 10 Support Center**
- **Forms are available here at the open house**