LEVEE SAFETY ACTION CLASSIFICATIONS and THE NATIONAL LEVEE DATABASE

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LEVEE SAFETY PROGRAM

Started after Hurricane Katrina

- Modeled after the Dam Safety Program
- Focus on Risk Reduction

National Levee Database

- Levee Safety Action Classifications: Determines the magnitude of the risk and can be categorized by urgency.

- Risk Characterization: Explanation of the Levee Safety Action Classification and what elements (**Hazard, System, or Consequences**) were determined to be drivers.

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Levee Safety Action Classification

Comprehensive risk assessment to candidly communicate an area's flood risk

Hazards + Performance + Consequences = LSAC (Risk Classification)/ Risk Characterization

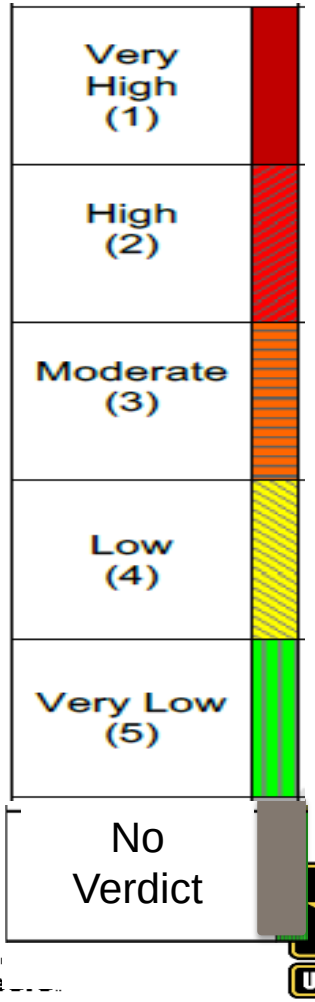
What are the hazards?

How likely are they to occur?

What is the system designed to defend?

How will the system perform?

What is the worst case scenario? Who and what is in harm's way? How susceptible to harm are they?



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Weight of “Consequences” in determining LSAC

(Snapshot: Sacramento River, CA)

- **East and West bank of the river levee system expected to perform similarly**
- **Risk of riverine flood event is the same**
- ***Consequences are significantly different***

RISK CHARACTERIZATION
SCALABLE RISK ASSESSMENTS

Hazards

Hydraulic Event

- Hurricane
- Riverine
- Rainfall

~Probability

Performance

Historical Performance

Levee Construction

Performance Ratings

- Embankment
- Floodwall
- Closures

Evacuation Effectiveness

- Planning
- Awareness
- Flood Warning Effectiveness

Consequences

Population

Infrastructure

Environmental Losses

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LSACs

LSACs are used to:

Improve risk communication

- Define risk for area
- National Levee Database
- Partnership

Inform residual risk

- Evacuation plan
- NFIP

Look at worst case scenarios

- Regional and national impacts

Help with prioritization

- Identify which systems to fund

LSACs DO NOT

LSACs do not *change or replace*:

Inspections

- Routine and Periodic inspections are only part of one element of the LSAC

NFIP

- Does not change status in NFIP
  - LSACs are not an evaluation of FEMA's levee accreditation standards

Condition of a levee system

- A robust levee system may be High Risk simply due to the consequences

MISSISSIPPI RIVER EAST BANK

- **LSAC:** **High**
- **Hazards:** Annual High Water Event on the Mississippi River
- **Performance:** Historically performed well
  Expected to perform as designed in future
- **Consequences:** **532,300** people
  151,200 Structures
  $81 billion Infrastructure
  (Based on the 2010 Census)

Primary Risk Drivers

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NEW ORLEANS EAST AND WEST BANK

- **LSAC:** **High**

- **Hazards:** High likelihood of tropical storms and hurricanes
  Annual High Water Event on the Mississippi River

- **Performance:** Performed designed during past events
  Continued Improvements and expected to perform in future events
  Good Community Awareness

- **Consequences:** **913,700** people
  325,700 Structures
  $170 billion Infrastructure
  (Based on the 2010 Census)

Primary Risk Drivers

Additional Information: Active Sponsors and Good Community Awareness

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National Levee Database

levees.sec.usace.army.mil