USACE Emergency Action Plan Guidance


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Bruce R. Rogers, P.G.

- EAP Guidance Update Team member
- Dam Safety Program Manager/Levee Safety Program Manager for Philadelphia District, USACE
- 39 years federal service, 37 years at USACE districts
Independent External Peer Reviews
2013 and 2016

2013

- “Updating of EAPs appears to fall short of the federal guidelines.”
- “Effective Emergency Action Plans (EAP) are a major program feature for preventing life loss downstream of USACE dams. The USACE EAP program, however, continues to be a significant risk to the dam safety program.”
- “There appears to be limited USACE management or oversight above the District office level with regard to implementation of EAPs.”
- “… insufficient evidence … of a strong relationship and close coordination with local EMAs.”
- “… unclear lines of the authority across the Division, District and projects with regard to the management of dam incidents, as they evolve in real time.”
- “Districts do not consistently update their EAPs annually.”
- “One District reported that it does not have effective EAPs at 20% of its dams.”

2016

- “… lack of national oversight of the EAP program”
- “The role of Emergency Management staff and their interface with Dam Safety may not be adequately defined.”
With Lake Oroville filled to the brim ... a collapse could cause a “30-foot wall of water coming out of the lake”

- Cal-Fire Incident Commander Kevin Lawson

February 13, 2017
Addicks and Barker Dams
2017
EAP Topics

- Lessons learned, priorities, path forward
  - USACE EAP guidance
  - EAP maps
  - Exercises

http://www.publications.usace.army.mil
USACE Publications, Engineer Circulars
EAP Guidance Overview

- **Scope** – dams and levees, risk informed
- **Vision** – Self-service (examples vs. templates)
- **Purpose** - *expands* upon existing federal guidance:
  - *Refinements*, based on USACE portfolio & organization structure
  - *Stresses consistency* for key plan components
    - Plan organization, communications, inundation maps, exercises, incident management authorities and responsibilities, reporting evidence of distress, security provisions and review and approval requirements
- **Recommended organization** for all USACE project EAPs
Applicability - EAP Guidance Update

- All dam projects subject to Engineering Regulation 1110-2-1156 (Dam Safety)
  - Owned, operated, maintained by USACE
  - Any dams which we work on for clients

- Levee projects
  - Required if USACE performs operation & maintenance
  - Encouraged for all others

- Inundation maps subject to Engineering Circular 1165-2-215 (Use and Dissemination of Dam and Levee Inundation Map Data)
Previous Guidance

- EC 1110-2-6074 supersedes:
  - ER 1110-2-1156 Chapters 13 and 16
  - EC 1165-2-215 (expired)

Coordinated with upcoming Levee Safety EC and revision to ER 500-1-1 (Emergency Ops) Consistent with EC 1110-1-108 (Flood Inundation Mapping)
Process & Timeline

- 2013 Dam Safety Independent External Peer Review
- JUN ‘14 Project Delivery Team kickoff
- NOV ‘14 HQs In Progress Review
- APR ‘15 HQs In Progress Review
- JUN ‘15 FEMA and National Dam Safety Review Board EAP work group (63 comments)
- 2016 HQs Safety Programs review
- JAN ‘17 USACE review (252 comments)
- MAY ‘17 HQs review (31 comments)
Significant Differences From Previous USACE Guidance

- Level of engagement with emergency managers
- Exercise frequency
- Inundation map standard
- EAP, map & data dissemination policy
- Emergency levels
- Notification scripts
- Incident management roles & responsibilities
Consistency with Other Federal Guidance Documents*

- Priority to involve emergency managers
- Plan organization
- Plan name & evacuation planning (dam guidance)
- Project emergency levels
- Evacuation responsibility (immediate downstream)
- Inundation maps & dissemination

* FEMA 64, FEMA 946, DHS-Emergency Preparedness Guidelines for Levees
Deviation from Other Federal Guidance Documents*

- “Breach” vs. “failure”
- Exercise frequencies tiered to risk
- Plan name (levee guidance)

* FEMA 64, FEMA 946, DHS-Emergency Preparedness Guidelines for Levees
Considerations for Future Federal Guidance Updates

- Inundation map standard
- Guide to Public Alerts and Warnings*
  - Example notification scripts
- EAP checklist

* [https://silverjackets.nfrmp.us/Portals/0/doc/WarningGuidebook_USACE.pdf?v=2015-08-10-213008-520](https://silverjackets.nfrmp.us/Portals/0/doc/WarningGuidebook_USACE.pdf?v=2015-08-10-213008-520)
EAP Guidance Contents

- Body – 19 pages
  - 16 sections/topics
- 10 appendices – 60 pages
  - Checklists
  - Exercise details
  - Example emergency notifications
  - Example non-disclosure agreement
  - Map standard
EAP Components Requiring Consistency Throughout USACE

- Name = EAP
- EAP organization
- Internal and external communications
- Inundation maps
- Exercise level & frequency
- Incident management authorities & responsibilities
- Reporting evidence of distress
- Review & approval

Write down this list! (if you remember nothing else from this briefing...
Name = Emergency Action Plan

The name of the plan is less critical than ensuring that a joint emergency planning process is taking place that includes the owner/operator of a dam or levee and state and local emergency management authorities. Multiple naming conventions are used for emergency plans developed by the project owners/operators, emergency management authorities, and local communities. To minimize confusion, USACE policy is to use the ‘[Project Name] Emergency Action Plan (EAP)’ for plans required by this guidance to be prepared and implemented by dam and levee project owners/operators.

Note: DHS 2012 guidance for levees introduced the term emergency preparedness plan (EPP), but the scope of an EPP is very similar to federal EAP guidance.
EAP Organization

Rationale: Consistent organization enhances readability and effectiveness

1. Summary of EAP responsibilities
2. Notification Flowcharts
3. Statement of Purpose
4. Project Description
5. Incident Response Processes
6. Roles and Responsibilities
7. Preparedness
8. Inundation Maps
Big ‘Ol Dam Emergency Action Plan

Consistent Guidance – Consistent EAPs for dams, levees and systems

Consistent Organization - readability
Internal and External Communications

Rationale: Consistent communication procedures by USACE nationwide minimizes confusion

- Notification flowcharts
- Project emergency levels
- Emergency announcements & communications
- Warning dissemination to public in immediate vicinity
Communications: Notification Flowcharts

Rationale: Prompt notification is crucial during emergencies

- Critical EAP content
  - Establishes external and district-internal command chain upward reporting procedures

<table>
<thead>
<tr>
<th>Component</th>
<th>Dam Safety Element</th>
<th>Levee Safety Element</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USACE Internal—District Command Chains</strong></td>
<td>Chief of Operations</td>
<td>Chief of Operations</td>
</tr>
<tr>
<td></td>
<td>Operations Project Manager (OPM)</td>
<td>Levee Safety Program Manager (LSPM)</td>
</tr>
<tr>
<td></td>
<td>Dam Safety Program Manager (DSPM)</td>
<td>Levee Safety Officer (LSO)</td>
</tr>
<tr>
<td></td>
<td>Dam Safety Officer (DSO)</td>
<td></td>
</tr>
<tr>
<td><strong>USACE Internal—Higher Command Chains</strong></td>
<td>Chief of Operations</td>
<td>Chief of Operations</td>
</tr>
<tr>
<td></td>
<td>Major Subordinate Command (MSC)</td>
<td>MSC</td>
</tr>
<tr>
<td></td>
<td>Headquarters (HQ)</td>
<td>HQ</td>
</tr>
<tr>
<td><strong>External—Principal Local Officials</strong></td>
<td>Local and State Emergency Management Authorities</td>
<td>Levee Owner/Sponsor Local and State Emergency Management Authorities</td>
</tr>
<tr>
<td><strong>External—Other Federal Officials</strong></td>
<td>National Weather Service</td>
<td>National Weather Service</td>
</tr>
<tr>
<td><strong>External—Public</strong></td>
<td>Downstream population affected</td>
<td>Individuals and communities in leveed areas</td>
</tr>
</tbody>
</table>

Common notification recipients to include in flow charts.
Communications: Project Emergency Levels

Rationale: Alignment with federal guidelines ensures common understanding

- Primary purpose is clear *external communication* of project condition and incident management activities being undertaken by the project owner.

**High flow emergency**

**Non-breach emergency**

**Potential breach emergency**

**Imminent breach emergency**

Previous terms: failure imminent or has occurred, failure situation is developing, non-failure emergency condition
Communications: Emergency Announcements

Rationale: Pre-scripted announcements ensure timeliness & that all important information components are addressed

<table>
<thead>
<tr>
<th>Announcement</th>
<th>Message Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Signal</td>
<td>Level—alert, watch, or warning</td>
</tr>
<tr>
<td>Source</td>
<td>District</td>
</tr>
<tr>
<td>Threat</td>
<td>Project condition: non-breach, potential breach, or imminent breach</td>
</tr>
<tr>
<td></td>
<td>Flow condition: high flow or normal flow</td>
</tr>
<tr>
<td>Location</td>
<td>Project name and location</td>
</tr>
<tr>
<td></td>
<td>Rivers/stream(s) affected</td>
</tr>
<tr>
<td></td>
<td>Impact area boundaries (easily understood)</td>
</tr>
<tr>
<td>Guidance</td>
<td>Nature of emergency/condition</td>
</tr>
<tr>
<td></td>
<td>Source(s) of additional information</td>
</tr>
<tr>
<td></td>
<td>Action for public to take</td>
</tr>
<tr>
<td>Time</td>
<td>Expected course of events</td>
</tr>
</tbody>
</table>

“Guide to Public Alerts and Warnings for Dam and Levee Emergencies:”
https://silverjackets.nfrmp.us/Portals/0/doc/WarningGuidebook_USACE.pdf
?ver=2015-08-10-213008-520
Emergency Signals & Notification Requirements

Table F-1 - Notifications Required for Emergency Condition

<table>
<thead>
<tr>
<th>Emergency Level/Project Condition</th>
<th>Flows</th>
<th>Signal</th>
<th>External Notification Required?</th>
<th>Internal Notification Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>High flow</td>
<td>High</td>
<td><strong>WATCH</strong> or <strong>WARNING</strong> depending on level of severity</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-breach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>Normal</td>
<td><strong>Alert</strong></td>
<td>Situational</td>
<td>Yes</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td><strong>WATCH</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td><strong>WARNING</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Potential breach</td>
<td>Normal</td>
<td><strong>WATCH</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Imminent breach</td>
<td>High</td>
<td><strong>WARNING</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Emergency level categories are not mutually-exclusive
Example Emergency Notification

**WATCH** Potential dam breach and imminent high flows, Westville Dam, Southbridge, MA

This is a **WATCH** declaration by the **SOURCE** U.S. Army Corps of Engineers (USACE), New England District (CENAE). **THREAT** A potential for dam breach due to a progressing seepage condition exists **LOCATION** at Westville Dam (NID MA00972), Southbridge, MA.

**GUIDANCE** This is a request to immediately initiate emergency response procedures and assess the need to evacuate threatened areas. Flooding can be expected along the river floodplains and some low lying areas may need to be evacuated. Additional information is available in the Westville Dam Emergency Action Plan (CENAE, 2012), including appropriate USACE contacts for situational verification. The New England District Emergency Operations Center has been activated. Updates will be provided as available.

**TIME** Discharges from the outlet works of 3,800 cfs will begin at 1100 on Wednesday, January 30, 2015 down the Quinebaug River and will continue through February 5, 2015.
Communications: Warnings to Public in Immediate Vicinity

Rationale: Areas immediately downstream of a project must be communicated with and directed quickly

- Required: Description of procedure & means for warning dissemination directly to the general public in the immediate vicinity of the project
  - National Weather Service and local emergency management have primary warning and evacuation authority
  - Pre-coordinate any necessary USACE actions with official warning & evacuation authorities. Clearly identify where & under what circumstances USACE will undertake public warning actions.
Two Critical Tasks for Owner/Operators

Corrective Actions

Potential Breach?

Notifications

Imminent Breach?
Communications: Warnings to Public in Immediate Vicinity

Rationale: Areas immediately downstream of a project must be communicated with quickly

- Required: Description of procedure & means for warning dissemination directly to the general public in the immediate vicinity of the project

![Figure 1 - Warning and Protective Action Initiation Timeline](image)
USACE Counsel: “If anything, the government's liability exposure would increase if it had information regarding an emergency, knew that local authorities couldn't get the word out quick enough, and failed to timely warn the public.”
# Exercise Levels and Frequency

<table>
<thead>
<tr>
<th>Classes</th>
<th>Seminar</th>
<th>Drill</th>
<th>Tabletop</th>
<th>Functional</th>
<th>Full Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSAC/LSAC 1 and High Hazard Potential</td>
<td>Annual</td>
<td>Annual</td>
<td>Biennial, recommended for odd years</td>
<td>Biennial, recommended for even years</td>
<td>At DSO/LSO discretion</td>
</tr>
<tr>
<td>DSAC/LSAC 2 and High Hazard Potential</td>
<td></td>
<td>Biennial</td>
<td>At DSO/LSO discretion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSAC/LSAC 3, 4 or 5 and High Hazard Potential and All Significant Hazard Potential</td>
<td></td>
<td>Year 5, 10, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Low Hazard Potential</td>
<td>Initial orientation seminar or drill.</td>
<td>Subsequent exercises at the DSO/LSO discretion.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lesson Learned:** Exercise by watershed, if practicable

Previous guidance: Seminar expectations unclear; classification categories were DSAC 2/3 and DSAC 4/5
## Dam Safety Scorecard – EAP and Exercise-Related Questions

<table>
<thead>
<tr>
<th>Agency and Public Response Preparedness – Maximum Score: 15</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Has and EAP been prepared and emergency contact lists, local contractor’s names and phone numbers lists, and emergency supplies lists all been updated or verified in the last 15 months?</td>
<td>7</td>
</tr>
<tr>
<td>Have inundation maps been prepared for uncontrolled release of water for ‘sunny day’ and flood flow conditions?</td>
<td>1</td>
</tr>
<tr>
<td>Has the EAP been coordinated with all upstream and downstream State, Federal and Local authorities who are responsible for developing evacuation plans?</td>
<td>1</td>
</tr>
<tr>
<td>Has the security office been invited to participate in the most recent annual or periodic inspection to facilitate their requirements to perform a physical security inspection?</td>
<td>1</td>
</tr>
<tr>
<td>Exercise-related questions (next slide)</td>
<td>5</td>
</tr>
</tbody>
</table>

EC 1110-2-6074
Dam Safety Scorecard – EAP and Exercise-Related Questions

- Maximum 5 points granted from these responses:
  - Has a dam safety Emergency Seminar Exercise been conducted within the current fiscal year as specified in EC 1110-2-6074? (1 point)
  - Has a dam safety Emergency Drill Exercise been conducted within the current fiscal year…(1 point)
  - Has a dam safety Emergency Tabletop Exercise been conducted within the timeframe specified…(3 points)
  - Has a dam safety Emergency Functional Exercise been conducted within the timeframe specified…(3 points)

- Change implemented in FY18
Importance of EAPs
Incident Management Authorities

- Shared by command, safety program, emergency management & operations functions
  - Authority to perform safety program activities, including during incidents, is provided by Congressional project authorizations and implemented by ER 1110-2-1156 and EC 1165-2-215
  - Authority to perform emergency operations is provided by Public Law 84-99 and implemented by ER 500-1-1 and Engineering Pamphlet 500-1-1

Inserted specifically to address Dam Safety IEPR comment
Incident Management - Project Emergency Level & Emergency Declaration

► **Project emergency level** – applies to USACE projects
  • Necessary and standardized per federal guidelines
  • Established by District Commander or delegate, thru dam/levee safety chain

► **Declaration of emergency** – applies to all emergencies
  • Formal declaration necessary to implement Civil Emergency Management Program (activate EOC)
  • Declared by District Commander or delegate, thru emergency management chain

Be prepared to eliminate confusion
Incident Management
Roles and Responsibilities

Rationale: Common understanding of the USACE incident management structure ensures rapid decision making to protect lives & property & preserves chain of command

- Overview of roles (ER/EP 500-1-1 for details)
  - District Commander
  - District Dam/Levee Safety Officers
  - District Emergency Manager
  - Operations Project Manager

*Inserted specifically to address Dam Safety IEPR comment*
Incident Management
Roles and Responsibilities

Rationale: Broad internal understanding of the USACE incident management structure ensures rapid decision making to protect lives and property while preserving the chain of command.

- District Commander
  - Declares and manages incidents and emergencies
  - Decides courses of action to assure life safety and reduce risk of project failure
  - Coordinates decisions with higher command when regional or national impacts may occur
Incident Management
Roles and Responsibilities

- Dam/Levee Safety Officers
  - Serve as principal advisor to District Commander for dam and levee safety incidents
  - Upward reporting in dam/levee safety chain
  - Advised by
    - Dam/Levee Safety Program Manager
    - Dam/Levee Safety Committee Members
Incident Management Roles and Responsibilities

- **District Emergency Manager**
  - Serves as principal advisor to District Commander for disasters and emergencies
  - Upward reporting within emergency management chain
  - Provides overall management of USACE emergency/disaster operations
  - Primary point of contact with state and local Incident Managers within the National Incident Management System
Incident Management Roles and Responsibilities

- Operations Project Manager
  - District manager on site during project incidents and emergencies
  - Responsible for routine inspections and notifications of distress to district office including dam/levee safety and water management functions
    - Details to be documented in project O&M manual, EAP and water control manual

Other roles - too much inconsistency to address in guidance (district-specific)
Reporting Evidence of Distress

Ensure district, MSC & HQs chain of command is aware and engaged

Evidence of distress that warrants upward reporting is observed to dam or levee project

Yes

No

Incident is managed within the district

District DSO/LSO coordinates with district emergency manager (EM) to initiate MSC coordination, develop the commander nominated Serious Incident Report (SIR) and release via ENGLINK, and draft follow up Situational Reports (SITREP)

District DSO/LSO notifies MSC DSO/LSO by telephone with follow-up documentation via email

MSC coordination, develop commander nominated SIR, draft follow up SITREPs

MSC DSO/LSO coordinates with MSC emergency manager (EM) on SITREP and/or other products as required

Review and release SITREPs via ENGLINK

UOC Duty Officer forwards SIR or SITREPs with all subsequent reports to HQ UOC E&C coordinator email address and dam and levee safety incident email address

HQ Dam/Levee Safety Representative notifies HQ DSO/LSO and coordinates with UCC and MSC for follow-up information

Figure 1 - Reporting Evidence of Distress to Dam and Levee Projects to USACE Operations Center and Headquarters Dam Safety Officer/Levee Safety Officer
Inundation Map Dissemination

- **Do** distribute EAPs with inundation maps to federal, state and local emergency management authorities (EMAs)
  - To included non-editable and editable electronic formats

- Commanders can choose to distribute directly to the public if benefits outweigh risks
  - Flood emergencies
# Inundation Map Dissemination

## Table D-1 - Dissemination of Emergency Action Plan Map Data

<table>
<thead>
<tr>
<th></th>
<th>Other Federal Agencies</th>
<th>State and Local Emergency Management Authorities</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data sharing</td>
<td>Open</td>
<td>More restrictive</td>
<td></td>
</tr>
<tr>
<td>Data sources</td>
<td>HIFLD, District</td>
<td>MSC, District</td>
<td></td>
</tr>
<tr>
<td>Protective markings</td>
<td>FOUO</td>
<td>Situational</td>
<td></td>
</tr>
<tr>
<td>Data type releasable?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-editable</td>
<td>Yes; recommend non-disclosure agreement</td>
<td>Emergencies: Yes Non-emergencies: provide information in writing for an individual piece of property</td>
<td></td>
</tr>
<tr>
<td>Editable</td>
<td>Yes; recommend non-disclosure agreement</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Supporting</td>
<td>Yes; recommend non-disclosure agreement and close technical coordination</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Owned by others</td>
<td>No; refer requestor to HIFLD. (It is okay to display location symbols on non-editable products.)</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

HIFLD is a DHS geospatial data source
# EAP/Inundation Map Roles and Responsibilities

<table>
<thead>
<tr>
<th>Activity</th>
<th>District Leads</th>
<th>MMC-MCX Leads</th>
<th>MMC-MCX Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare and disseminate EAP</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Hydraulic study and EAP map scenarios</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Exercises</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Disseminating USACE EAP maps &amp; data direct to local EMAs</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Disseminating USACE EAP map data to FEMA/DHS, accessible by local EMAs (HSIP/HIFLD)</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
## EAP/Inundation Map
### Roles and Responsibilities

## Review and Approval

<table>
<thead>
<tr>
<th>Status</th>
<th>District</th>
<th>MSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects with new EAP or significant update</td>
<td>Formulate, recommend, and implement. Reviewed by district DSO/LSO</td>
<td>Reviewed and approved by MSC DSO/LSO</td>
</tr>
<tr>
<td>All projects</td>
<td>Annual review required; update when needed. Update notification list annually.</td>
<td>Review during periodic inspection/assessment</td>
</tr>
</tbody>
</table>
Inundation Map Standard

Rationale: A consistent format promotes understanding
Lesson Learned from the Oroville Dam incident:

- Need additional inundation scenarios run for some dams
- Oroville Dam had a probable maximum flood (PMF) dam break scenario, but the incident was only spillway flow
- This led to over-evacuation downstream

Although USACE dam inundation maps display only two scenarios, additional scenarios were run and are available electronically on the MMC Data Viewer.
When to Use the Map Standard

- EAP maps
- Scenarios
  - Planning
  - Exercises
  - Incidents
- Flood inundation mapping

The USACE Flood Inundation Mapping Cadre and MMC-MCX have used the map standard in support of numerous flood emergencies covering more than 13,000 stream miles. Events have included dam safety incidents, levee overtop/breach risks and riverine flooding both with and without spillway releases from flood control dams.

Port Arthur Levee System – Hurricane Harvey 2017
Hurricane Harvey

- Actual event (flood depths > 2ft)
- Barker Dam breach scenario
27 Aug 2017 - Hurricane Harvey Inundation

Event Timeline
25 Aug 17 - Reservoirs are empty prior to Hurricane Harvey
28 Aug 17 - Surcharge releases from Addicks and Barker begin
29 Aug 17 - Water begins flowing around north end of Addicks
29 Aug 17 - Releases increase from Addicks and Barker
30 Aug 17 - Addicks and Barker reach peak elevations
03 Sep 17 - Releases decrease from Barker
09 Sep 17 - Releases decrease from Addicks
15 Sep 17 - Surcharge releases end

Model Animation

https://www.dvidshub.net/video/548079/usace-harvey-timeline
EAP Guidance Path Forward

- Revision to engineer regulation (2020)
  - EAP templates
  - Separate guidance for dams and levees
  - More prescriptive on some topics
  - Targeted priorities

- 2017 External peer review comments
  - National team of EAP experts & oversight function
  - Stronger emergency management involvement
  - EAP scope vs. surveillance and monitoring plans
  - District command priority
How do I provide comments?

- Written comments should be emailed to HQ-EAP@usace.army.mil