Corps of Engineers
Levee Safety Program
Brian Jordan - Section Chief, Analytical and Levee Safety Section

Craig McRaney - Levee Safety Program Manager

Lanny Barfield - Levee Safety Officer and Geotechnical Branch Chief
Levee Safety Program Activities

- Routine Inspections
  - PL 84-99
  - SWIFs
- Periodic Inspections
- Levee Screenings
- Levee System Evaluation Reports
- 408 Permits
- Risk
USACE Levee Safety Program
Primary Objective

Public Safety
Levee Safety Program Message

- Public Safety is Our Top Priority
- Levees Do Not Completely Eliminate Flood Risk
- Levee Safety Is a Shared Responsibility
Routine Inspections

- Annual, Maintenance, or Continuing Eligibility Inspection.
- Evaluate Compliance with Assurances
- Evaluates Maintenance as it Relates to the Design Project Flood, Owner Preparedness and Component Operations.
- May or May Not Affect NFIP Eligibility.
- Used to Determine Continuing Eligibility for Rehab Assistance Under PL 84-99 Program.

BUILDING STRONG®
Routine Inspections
PL 84-99

- Public Law (PL) 84-99
  - Federal law which gives the Corps the legal authority to supplement local efforts in the repair of flood control projects that are damaged by floods.
**PL 84-99 Interim Guidance**

Enclosure 3: Subset of Inspection Items for Rehabilitation Program Eligibility Determination

In order to be eligible, all of the following items must be rated A, M, N/A or Yes.

Note: Item numbers listed below refer to their placement in the Inspection Checklist (Enclosure 2).

### Rehabilitation Program Eligibility Determination

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Rated Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public sponsor provided maintenance information per the Public Sponsor Pre-Inspection Form.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Non-federal levee system meets Initial Eligibility criteria.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>If either of the above items is marked &quot;No&quot; the levee system is not eligible.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Levee Embankments

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Rated Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Encroachments</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>4. Closure Structures (Stop Log, Earthen Closures, Gates, or Sandbag Closures)</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>5. Slope Stability</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>6. Erosion/ Bank Caving</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>10. Animal Control</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>11. Culverts/Discharge Pipes (This item includes both concrete and corrugated metal pipes.)</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>14. Underseepage Relief Wells/Toe Drainage Systems</td>
<td>U</td>
<td></td>
</tr>
</tbody>
</table>

#### Floodwalls

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Rated Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Encroachments</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>3. Closure Structures (Stop Log Closures and Gates)</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>5. Tilting, Sliding, or Settlement of Concrete Structures</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

#### Interior Drainage System

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Rated Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Culverts/Discharge Pipes</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>10. Sluice/Slide Gates</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>11. Flap Gates/Flap Valves/Pinch Valves</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

#### Pump Stations

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Rated Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Intake and Discharge Pipelines</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>18. Sluice/Slide Gates</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>19. Flap Gates/Flap Valves/Pinch Valves</td>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

#### Rehabilitation Program Status

- **Active**: System meets all interim eligibility criteria, including having received a rating of A, M, N/A or Yes for all subset items and is therefore eligible for rehabilitation assistance.
- **Inactive**: System does not meet interim eligibility requirements.

**Comments:**
Routine Inspections

SWIF

System-Wide Improvement Framework

- A SWIF provides sponsors the opportunity to transition their levees over time to USACE standards.

- By using a SWIF, sponsors can prioritize deficiencies to address the highest risk first to achieve system-wide risk reduction.

- SWIF is appropriate are when a longer-term, holistic approach may be necessary to address multiple engineering deficiencies AND operation and maintenance deficiencies.

- A SWIF may include corrective action for overarching operation and maintenance (O&M) deficiencies, for example, a system-wide culvert replacement (Not for Individual O&M Deficiencies).
Periodic Inspections

- Also a Continuing Eligibility Inspection For PL 84-99 Assistance.
- Also Evaluates Maintenance, Preparedness, and Component Operation.
- Replaces the Annual Inspection for the Year Performed.
- Utilizes Same Checklist.
- Inspection More Thorough as Crown, Levee Slopes, and Levee Toes Traversed.
- System Design Reports, Plans & Specs, Studies, Past Performance Inspection, Records Reviewed.
- Design Criteria Review Performed.
  - Does Design Meet Current Criteria?
- Provides Data and Information in Levee System Screenings.
Levee Screenings

- Risk Assessment of the Levee System

- Purpose:
  - To Prioritize Levee Systems Based on Risk.
  - Develop a Relative Risk Ranking for Corps Levees.

- Input Into Screenings From:
  - NLD
  - Routine and Periodic Inspections
  - Historic Performance During High Water
  - Limited Engineering Assessments
  - Data on Consequences (Population, Structures, etc.)
Levee Evaluations for NFIP

(formerly Levee Certification)
Levee Evaluation for NFIP

- FEMA is responsible for the National Flood Insurance Program (NFIP).
- Levee Evaluation/Certification is a requirement for FEMA accreditation in the NFIP.
- FEMA does not Evaluate/Certify levees.
- USACE has authority to perform NFIP Levee Evaluations for MR&T levee systems for which it has maintenance authority.
- USACE Evaluations in Accordance With EC 1110-2-6067.
- Evaluated to 1% Event.
Section 408 Permits

- **33 USC 408**
  - Section 408 authorizes for the alteration or occupation or use of the project if it is determined that the activity will not be injurious to the public interest and will not impair the usefulness of the project.
  - Vicksburg District uses DR 1130-2-530 for Guidance.
  - Currently 408 Permits are technical Reviewed by the Corps and Letters of Objection or No Objection Provided to Sponsor.
  - Sponsor Issues the Permit.
  - New Guidance from HQ in Effect in July
    - Corps Will Issue Permits (Signed by Col.) for Alterations on Project Right-of-Way (ROW).
    - Corps has No Authority to Regulate off ROW.
Risk
Define Risk

Risk = f(Hazard, Performance, Consequences)
The End

Discussion?