Flood Insurance and Levees

- NFIP Requirements are found in 44 (CFR) Section 65.10
  - General Requirements—65.10(a)
  - Design Criteria—65.10(b)
  - Operation Plans and Criteria—65.10(c)
  - Maintenance Plans and Criteria—65.10(d)
  - Certification Requirements—65.10(e)
- FEMA requires a responsible entity for data & documentation, i.e. the levee owner, sponsor, and/or community to document compliance
General Requirements – 65.10(a)

- General Requirements include:
  - Meeting minimum standards
    - design,
    - operation,
  - and maintenance standards

- Design, operation, and maintenance standards are outlined in 44 CFR 65.10(b)-(d)
Design – 65.10(b)

- Design Criteria:
  - Freeboard – levees must be a minimum of three feet above the Base Flood Elevation - 1% chance or 100 year flood event
    - This project was authorized at the 0.5% or 200 yr event
    - Profile of River elevations at these events with the project
  - Additional levee freeboard requirements apply within 100ft of structures and at the upstream and downstream ends of the levee
  - Closures – all openings must have closures in accordance with sound engineering practice
    - Sandbags are accepted practice, but we need to do better
  - Embankment Protection
Little Calumet River Profile
Operation – 65.10(c)

Operation Criteria:

- Operations must be under the jurisdiction of:
  - an agency created by Federal or state law,
  - an agency of a community participating in the NFIP

- Operations plans must be in place for Closures, Interior Drainage Systems, and Other features and contain, at a minimum:
  - Flood Warning System
  - Formal operation plan specifying actions & responsible parties
  - Provision for manual backup of automatic systems
  - Periodic inspection and operation of mechanized portions
Maintenance criteria include:

- All maintenance activities under the jurisdiction of:
  - an agency created by Federal or state law,
  - or an agency of a community participating in the NFIP

Plan must ensure:

- overall levee stability, integrity, height and functionality of associated structures

Plan must address minimum levels of frequency and the responsible entities for the maintenance activities to be performed
Certification - 44 CFR 65.10 (e)

- Design data must be certified by a **Registered PE** or a **Federal agency** compliant with structural requirements in 65.10(b)(1)-(7)
- Certified as-built levee plans must be included in the submittal
Certification Defined 65-2(b)

- **Certification by Registered Professional Engineer (PE) or Federal Agency**
  - Does not constitute a warranty or guarantee of performance, expressed or implied
- **Certification of Data**
  - Statement that data are accurate to the best of the certifier's knowledge
- **Certification of Analyses/Structural Works**
  - Statement that analyses were performed correctly and in accordance with sound engineering practices
- **Certification of ``As-Built'' conditions**
  - Statement that structure(s) were built according to the plans being certified, are in place, and are fully functioning
Eastern End - Little Calumet River
1:24,000
Western End - Little Calumet River
1:24,000
## At Risk Parcels vs. Flood Insurance Policies in Force

<table>
<thead>
<tr>
<th>Community</th>
<th>Parcels Impacted by Little Calumet River by Community</th>
<th>Total Number of Insurance Policies by Community*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammond</td>
<td>4,043</td>
<td>Hammond – 2,255</td>
</tr>
<tr>
<td>Munster</td>
<td>1,479</td>
<td>Munster – 921</td>
</tr>
<tr>
<td>Gary</td>
<td>3,699</td>
<td>Gary – 170</td>
</tr>
<tr>
<td>Griffith</td>
<td>116</td>
<td>Griffith – 363*</td>
</tr>
<tr>
<td>Highland</td>
<td>1,953</td>
<td>Highland – 1,222</td>
</tr>
<tr>
<td>Total</td>
<td>11,290</td>
<td>Total – 4,931</td>
</tr>
</tbody>
</table>

*Note: Griffith’s number includes properties on Little Calumet River as well.*
Flood Insurance Premium Based on $100,000 Building Coverage*

- Average Insurance Premium for House in Zone X (Protected by Levee)
  - $260.00

- Average Insurance Premium for House in Zone A (Levee De-Accredited)
  - $800.00

*Slide is for Illustration Purposes Only. Rates will vary based on construction type, construction date, etc.
Going Forward


- **Accreditation**