Why Comply?
The How-To’s of Floodplain Compliance

To Protect and Enhance Kentucky’s Environment
Outline

• Understanding Risk
• When Does Compliance Happen
• Compliance Steps for Local Officials
• Benefits to Citizens
• Post-Disaster Compliance
• Keys to a Successful Compliance Program
Understanding Risk
Why do we care about floodplains?

• Floodplains are inherently dangerous areas
  • Areas that are most likely to flood (High Risk)
• KY has had 78 flood deaths from 1996 – 2017
• KY has 1% of the U.S. population but accounts for 4% of U.S. flood deaths since 1996

Source: [http://www.weather.gov/jkl/flooddeathhistory](http://www.weather.gov/jkl/flooddeathhistory)
• Floodplain management should be viewed as a public safety program at the local level
What is a Flood?

• NFIP Definition:
  • “A general and temporary condition of partial or complete inundation of 2 or more acres of normally dry land area or of 2 or more properties...from unusual and rapid accumulation or runoff of surface waters from any source”

• Flood Definition Explained:
  1) Temporarily inundated land
     - Normally dry
     - Must be partially or completely inundated
  2) Area requirement
     - Area inundated can be small
       - 2+ acres of normally dry land; or
       - 2+ adjacent properties
What do the Zones Mean?

- Zone AE
  - High Risk
- Zone A
  - High Risk
- Zone X (shaded)
  - Moderate Risk
- Zone X
  - Low Risk
Low Risk ≠ No Risk
When Does Compliance Happen?
When Does Compliance Happen

- Permitting
- Inspection
- Enforcement
Compliance Steps for Locals
Knowledge

• Read and understand your ordinance

• Educate the governing body

• Conduct outreach to the public
  • Require permits
  • Handouts
  • Mailers
  • Community website
  • Newspaper notices
  • Radio announcements
Steps to Local Permitting

1) Make Determinations
   • Floodplain
   • Development

2) Require a state floodplain permit

3) Have property owner complete a Local Permit Application

4) Review the local application for compliance with community ordinance. If it complies, issue a local permit
   • Give applicant an permit, but keep a copy for local records

5) Inspect
Why Inspect?

• No matter how careful you are when you issue a permit, if they don’t comply it did no good.
• Good inspection and enforcement procedures are critical in reducing risk
• 3 general phases of inspection
Local Inspection Procedures

• Inspection Phase 1 – Pre-Construction
  • Verify reference marks are present
  • Verify floodway boundaries are identified
    • Required to be staked out by state floodplain permit conditions
  • Take photos
    • Keep for local records

• May be done as part of the application process
  • Have the applicant submit pictures showing this information
Local Inspection Procedures Cont.

• Inspection Phase 2 — During Construction
  • Fill
    • Clean & compacted
    • Verify the ‘Top of Fill’ elevation for structures before they being construction
  • Footing
    • Setbacks from watercourses and/or roads
    • Building location is where plans indicated
  • Foundation
    • Proper elevation of lowest floor & located where plans indicated
  • Crawl spaces
    • Ensure flood openings are present
    • Ensure the interior grand is at or above exterior grade (basement)
Local Inspection Procedures Cont.

• Inspection Phase 2 – During Construction
  • Flood Openings and/or Vents
    • Ensure the proper number are present & properly installed
      • 1 in² for each 1 ft² of enclosure; minimum 2 required; within 1 ft. of grade (interior or exterior)
  • Manufactured homes
    • Permanent & reinforced foundations (piers, pilings, and/or foundation walls)
    • Properly anchored & secured to permanent foundation
  • Non-residential buildings
    • Flood-proofed (wet or dry) certified by a PE to the BFE + 1 ft.
  • Take photos
    • Keep for local records

• Communities can issue phased permits if they would like
Local Inspection Procedures Cont.

• Inspection Phase 3 – Post-Construction
  • Verify utilities & building elements are at or above BFE
  • Uses of enclosure (parking, storage, or access)
    • Interior grade of enclosure should be at or above exterior grade (basement)
  • Vent openings present & properly located
  • Flood damage resistant materials were used below BFE
  • Manufactured homes & permanent tanks properly elevator or anchored
  • Collect final Elevation or Floodproofing Certificate

• Communities can require a written submittal from applicant showing compliance. May also require an Elevation Certificate.
Possible Violations

- During an inspection or field visit, if a possible violation is identified:
  - Document the violation
    - Pictures and/or video
    - Description of the action
    - Location (Latitude & Longitude, and a street address if available)
  - Talk with the property owner or developer
  - Contact the Division of Water Regional Office Supervisor

https://eec.ky.gov/Environmental-Protection/Water/Pages/Regional-Offices.aspx
Local Enforcement Procedures

Without a Permit

1) Issue a ‘Stop Work Order’
   • Article 4, Section C(7)
   • Letter should include:
     • Brief description of violation
     • Effective date
     • Signature

2) Issue a ‘Notice of Violation’
   • Article 3, Section H
   • Letter should include:
     • Ordinance that was violated
     • Description of noted violations
     • Remedial Actions to be taken
     • Deadline to complete actions & submit follow-up information

3) Proceed with legal action
   • Article 3, Section H(4)
     • Fines and/or jail time

4) Withhold the Certificate of Occupancy or Utility Inspection

5) Section 1316: Denial of Insurance
Local Enforcement Procedures

With a Permit

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3) Revoke the permit if the property owner fails to comply

4) Proceed with legal action
   • Article 3, Section H(4)
     • Fines and/or jail time

5) Withhold the Certificate of Occupancy or Utility Inspection

6) Section 1316: Denial of Insurance
Benefits of Complying to Citizens
Lenders and the NFIP

• Lenders are required by law to ensure property owners to have flood insurance with a federally backed mortgage

• Can require flood insurance at any time, regardless of flood zone

• Homeowner can request a Letter of Map Change (LOMC) to have property removed from floodplain
  • Lender may still require flood insurance even with a LOMC
How you build affects your premiums
Private Citizens

- Property owners that comply with their community’s floodplain requirements reduce their risk
  - Reduced risk results in reduced insurance premiums

- Over 30 Years
  - BFE-1 = $143,580
  - At BFE = $64,410
  - BFE+3 = $18,420
Private Citizens Cont.

• Reduced risk of flood damage occurring

• May increased property value

• Better resale value
  • Future buyers will have less of a financial burden when required to have insurance
  • Easier to sell
Best Enforcement Procedure!

THE BEST WAY TO ENFORCE YOUR ORDINANCE IS TO CONVENCE A PROPERTY OWNER THAT COMPLYING IS IN THEIR BEST INTEREST
Post-Disaster Compliance
Substantial Damage Assessments

• Substantial Damage (SD):
  • Cost of the damage repair equals or exceeds 50% of the structures pre-damage market value.
  
• Anytime the work is substantial, the entire building must comply with state and local floodplain requirements to prevent future damages

• SD Determinations are done in the floodplain only

• Intent of SD:
  - Structure will require significant $$$ to repair, this protects the structure going forward from future flood damages
Factors Leading to SD/SI Determination

• Flooding Above 1st Floor
• Extended Duration
• High Velocities
• Damage of ANY origin
  • Earthquake
  • Fire
  • Tornado
  • High Winds
  • Hail

Source: https://bit.ly/2MSJRy4
Conducting Post-Disaster SD Inspections

- Identify the Assessment Team
- Who is doing the work?
- Determine the Assessment Area
- Post Re-Entry Assessment Notice on all damaged structures
- Perform an individual assessment on each damaged structure
- Record the data
- Notify property owner of the assessment & next steps
Conducting Post-Disaster SD Inspections Cont.

- Damaged < 50% & Habitable
- Damaged < 50% but is NOT habitable
Conducting Post-Disaster SD Inspections Cont.

- Damaged ≥ 50% & Uninhabitable

- Damaged ≥ 50% & NOT safe to enter
### Preliminary Assessment - Damage Levels and Conditions

Conducting Post-Disaster SD Inspections Cont.

As soon as possible after the water has receded to an extent that buildings are accessible, and after clearance by emergency officials, any flood-damaged structure should be assessed. The property owner or representative should be present for the initial assessment. The primary purpose is to quickly identify the entry. The secondary purpose is to estimate the percent of damage that has occurred. Photographs of the damage should be taken. At the conclusion of the preliminary damage assessment, the structure should be tagged with the building status.

**WHITE:** No assessment was made. Building was damaged and an assessment is required before reentry can be authorized.

**GREEN:** This building was assessed. No obvious safety hazards were found. Flood damage was apparently insignificant; no repairs beyond clean-up were required, and continued use and occupancy is authorized immediately.

**YELLOW:** This building was assessed. Flood damage repairs are needed before occupancy can be approved, but no significant life-safety hazards were apparent. Entry to the building for the purpose of personal property retrieval, clean-up, and assessment for repairs is authorized. A floodplain development permit and any other building permits are required before electrical, plumbing, mechanical, or building repairs are started.

**ORANGE:** This building was assessed. Damage to the building was apparent in excess of 50% of the building value and repairs cannot be authorized unless the structure can comply with all of the community’s floodplain management requirements.

**RED:** This building was assessed. There were apparent serious damage or a hazardous condition which makes reentry unsafe. Entry may result in injury or death. Use or occupancy of the structure is prohibited and entry for any purpose requires special arrangements approved through the assessing official.

Note: Any structures requiring a RED notice should receive a follow-up letter from the community informing the property owner of their options for mitigating the structure in accordance with Federal, State, and local requirements.

Completeness and accuracy of information on the preliminary damage assessment forms is vital. Missing or incorrect information results in delays.

### Damage Levels and Conditions

<table>
<thead>
<tr>
<th>Assessment Tag</th>
<th>Damage Level</th>
<th>Sample Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHITE</td>
<td>Undetermined</td>
<td>Damage present</td>
</tr>
<tr>
<td>[Assessment Required before reentry]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td>Minor repairs needed</td>
<td>Broken windows, damage to landscaping, punch-thru damage, targets stabbed on first floor, chimney damage, business sign damage, putting out damage</td>
</tr>
<tr>
<td>[Preliminary Assessment Conducted]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td>Major repairs needed</td>
<td>Interior floor and wall damage, interior damage to structure, damage to window, door, or other structural member or openings, minor tanks, basins, or other small vessels, lintel damage, float vehicle damage, flood equipment damage</td>
</tr>
<tr>
<td>[Building Assessed]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORANGE</td>
<td>Major repairs needed</td>
<td>Water strives first floor, utilities damage (plumbing, water heater, well, septic system, etc.), structure moved off of foundation, walls collapsed, interior frame damage, roof off or collaps, foundation damage, insulation damage, exterior wall damage, once room destroyed, suite flooded, accessory service buildings; damage, production, or office equipment damage</td>
</tr>
<tr>
<td>[Building Assessed]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RED</td>
<td>Destroyed; apparent extensive damage; no re-entry allowed</td>
<td>Structure leveled, foundation/ basement damage, water above the sills, second floor missing</td>
</tr>
<tr>
<td>[Building Assessed]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**• Description of the Damage Levels**

**• Sample Conditions for Color Tags**
Keys to a Successful Compliance Program
#1 Have a Plan
#2 Communication

• Risk Communication is intended to supply laypeople with the information they need to make informed, independent judgements about risks to health, safety, and the environment.

• People have to be aware of a risk to take an action to protect themselves
  • Only about 30% of people are aware of their flood risk

Source: https://goo.gl/sivlzp
Ways to Communicate

- Brochures, pamphlets, & handouts
- Local Government News Release
- Mailers and Email
- Community website
- Local news media outlets
- Social Media
- Signage
- Permits
- Technical bulletins
- Fact sheets
#3 Know Your Ordinances

• All communities participating in the NFIP have a local Flood Damage Prevention Ordinance (FDPO)
  • Local Floodplain Coordinator

• Local standards may be higher than the State
  • Freeboard
  • Longer SD/Sl period
  • Fill requirements

• Does my community participate in CRS?
Local Responsibilities

• When you require permits to develop in the floodplains, you are enforcing the local ordinance regulations, not FEMA’s!
  • The authority to regulate floodplains is under the local jurisdiction.
#4 Record Keeping

- Paper Flood Maps
- LOMC Letters
- Permit Applications
- Issued Permits
- Inspections
- Certificates
- Enforcement Actions
Record Keeping for Disasters

• Response plan
  • Have supplies on hand:
    • Damage Assessments
    • Colored Placards

• Work with your department heads to establish a system to track needed information in real time
#5 Maintain Your Maps

- Things change
  - Require citizens to update the map when changes are made
- Keep FIRMs & LOMC Letters for community records in perpetuity
- Participate in the map update process
  - You know your community better than we do
#6 Be a Champion

- Communities have to steer the ship
  - Engage local leadership
  - Promote participation
  - Communicate to citizens
  - Understand capabilities
  - Develop a strategy
Contact Info

• Alex VanPelt
  • Kentucky NFIP Coordinator

  alex.vanpelt@ky.gov
  (502) 782-7120  (Direct Line)

  Division of Water
  300 Sower Blvd., 3rd Floor
  Frankfort, KY 40601

• Division of Water
  • General DOW Contact

  water@ky.gov
  (502) 564-3410

  Division of Water
  300 Sower Blvd., 3rd Floor
  Frankfort, KY 40601
Questions