Success Stories from the Front Line
Partnering for Flood Risk Reduction

David Sturch, Planner III, City of Cedar Falls, Iowa
Presentation Outline

- Floodplain
- Flood Events
- Actions/Projects
- Other Activities
- Partnerships
Cedar Falls, Iowa

- Northeast Iowa
- 41,255 (Census 2015 estimate)
- Black Hawk County population = 132,904
Floodplain

• Floodplain Characteristics
• Buyout Program
• Flood Photos
• Flood Event Actions
Floodplain Characteristics

- Cedar River
- 4,100 acres in the SFHA
- A and AE zones

- Top 5 River Levels
  - 2008 – 102.13
  - 2016 – 98.9
  - 1999 – 96.2
  - 1961 – 96.1
  - 1993 – 95.8
- Top of the Levee – 102.9
Cedar Falls Flood Buyout Program

- 1993 = 100 properties
- 1999 = 65 properties
- 2008 = 171 properties

- Residential = 318
- Vacant Lots = 5
- Commercial = 11
- Mobile Home Parks = 2
- Total = 336
Flood Photos - 2008-2016
Flood Photos - 2008-2016
Pre-Flood Preparations

- PSAs
- Set up Emergency Operations Center (EOC)
- Departmental assignments
- Fire Department Distributes Flood Information
  - Door to door

<table>
<thead>
<tr>
<th>Zone</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>95.9</td>
<td>Water covers E. Lone Tree Rd., 200–300 blocks covered</td>
</tr>
<tr>
<td>30</td>
<td>95.9</td>
<td>Water covers south end of Timothy St.</td>
</tr>
<tr>
<td>31</td>
<td>96.0</td>
<td>Water covers 1500–1700 blocks of Center St. between the Brown Bottle &amp; Cottage Row Rd.</td>
</tr>
<tr>
<td>32</td>
<td>97.8</td>
<td>Water covers the 200 block of E. Lone Tree Rd.</td>
</tr>
</tbody>
</table>
Pre-Flood Preparations

• Donation drop off sites
  • Food, clothing, cleaning supplies, pet food
  • Red Cross partner
Flood Event

- Flood status
- Staff EOC 24/7
- Sandbagging
- Bladder system
Flood Event

- Citizen flood status
- Staff EOC 24/7
- HESCO barrier units
- Bladders
Post-Flood Activities

• Property Inspections
  • Distribute post flood information
Post-Flood Activities

- Damage assessments
- Continue EOC Operations
Actions/Projects

- Ordinance Development
- Mapping Updates
- Local Projects
- Other Development Factors
Ordinance Development
Flood of 2008 Warranted Changes

Major changes include
- Lowest floor
  - 500 year flood elevation +1 foot
- Limit fill activity in SFHA
  - 3 foot maximum fill height
  - 1/3 of the lot area
- No LOMRs
- Limit platting of lot in SFHA
Map Updates

Flood Rate Insurance Map

- New FIRM maps adopted in July of 2011
- Worked with FEMA to complete the analysis of unstudied areas of the SFHA
Local Projects

Public Alleyway Projects
• Permeable pavers
• Stormwater control
Biocells installed as a part of the road project
Other Development Factors

Subdivision Ordinance Requirements
- Stormwater management plan
  - Grading
  - Stormwater routing
  - On-site Detention Basins and Water Quality
- Environmental Checklist
  - Soils analysis
  - Wetlands

SWPPP Development (Stormwater Pollution Prevention Plan)
- Permitting for new construction
Other Activities

- Community Rating System (CRS)
- The Watershed Approach
- Partnerships
Community Rating System

- Cedar Falls CRS Community – May 2014
- Class 5
- Up to a 25% discounts on flood insurance
Community Rating System

- Awarded points on certain activities
  - Maintaining flood maps, permits, elevation certificates
  - Public outreach
  - Open space preservation (buyouts)
  - Higher standards
  - Repetitive Loss Properties
  - Stormwater management
  - Floodplain management planning (Hazard Mitigation)
Watershed Management Authority

2010 Iowa Legislation authorized the creation of WMAs
• Assess and reduce flood risk
• Assess and improve water quality
• Monitors federal flood risk and planning activities
• Flood and water quality education
• Allocate $$ for water quality and flood mitigation
Watershed Management Authority

Middle Cedar WMA
- 1.55 million acres
- Local officials, cities, counties, stakeholders
- Develops partnerships
- Leverage resources for funding and technical expertise
Partnerships

- National, State, Local Governments
- Acronym Agencies
- Engineers/Surveyors
- Property Owners/Citizens
Thank You and May the 4th Be With You

Thank You

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