Building Flood Resilience
STOP MIDLOTHIAN FLOODING NOW
When my property flooded I lost my...

- Family room, water heater
- College papers, spare bedroom
- Furniture, garage space
TYPES OF FLOODING

Image Courtesy of: Institute for Catastrophic Loss Reduction
OVERVIEW

• National non-profit
• Founded in 1978 + headquartered in Chicago
• Urban sustainability

RainReady services
• Launched 2014
• Complete ‘end-to-end’ service package
• Customer-focused
• Home, neighbor, community, watershed
• Replicable model, national expansion
WATERSHED
When my property flooded
I lost my...

- Television
- Couch
- Love Seat
- 2 Hassocks
- 4 Bookshelves
- Desk & Chair
- Tables & Side

- 2 Bookshelves
- Storage Shelves
- Freezer
- Grandfather Clock
- Tape Storage Rack
- 3 Built-in Clothes Closets
When my property flooded...

"I lost clothes and floor damage"
One of 12 homes with repeat flooding
Reaches 3 foot
Over 15 year period
The Prevalence and Cost of Urban Flooding
A Case Study of Cook County, IL
Phase One (May 2013)

Median Income and Highest Concentrated Damage

- Hardest Impacted Zip Codes
  - Highest Number and Dollar Payout
  - Zip Code
  - Floodplain

- Median Household Income
  - Cook County Median $50,813
  - $19,000 to $47,000
  - $47,000 to $62,000
  - $62,000 to $81,000
  - $81,000 to $118,000
  - Greater than $118,000
- 115 flood victims surveyed
- 70% flooded 3 or more times in 5 years
- 84% suffered stress
- 41% lost the use of part of their property
“Urban Flooding” defined

The inundation of property in a built environment, caused by rainfall overwhelming the capacity of drainage systems, such as storm sewers.
Characterized by

Repetitive and chronic impacts on communities, regardless of their location within or outside of formally designated floodplains
Congrats to IDNR!
- Claims filed in 99% of Illinois counties
- Flood damages between 2007-2014, $2.3 billion
- Half of it private insurance
- Over 90% outside of mapped floodplains
- What’s going on?
WHAT WE DO

Monitor

Assess

Implement

Plan
RAINREADY COMMUNITY
Do you experience flooding?

- Yes - 57%
- No - 43%
Steps to a Rain Ready Chatham

- Call your alderman
- Rain Ready.org
- Camera (for water proof)
- Request a map of the sewer system
- Use social media
- More community participation (block clubs)
- Disconnect downspouts
- Connect with other flooding properties
- Talk to landlord/property manager about downspouts & improving yard
- Splash guard or stones to distribute rushing water.
$10M!

- Active Transportation Alliance Healthy Hot Spots Program $39K, Complete Streets Policy
- Morton Arboretum EAB Replacement - $18K
- NPS Rivers, Trails, and Conservation Assistance Program, Natalie Creek Multi-Use Trail Plan
- Illinois Green Infrastructure Grant from the IEPA Bureau of Water - $68K, Village Greenway Project (Permeable Parking Lot & Rain Garden)
- Illinois Department of Natural Resources Coastal Waters Program - $20K, Village Greenway Project
- Openlands-ComEd Green Region Program - $10K Village Greenway Project
- CMAP LTA, 147th Street Corridor Study - $80K
- South Suburban Mayors and Managers Association Planning Technical Assistance, Natalie Creek Multi-Use Trail Plan
- Metropolitan Water Reclamation District - Natalie Creek Improvements - $8.3m
Complete Streets
Open House
Sat., June 18
Midlothian Public Library
1 pm - 3 pm

What changes do you want around the Midlothian Metra station to feel safe on your transit commute, walk, or bicycle ride? Come tell us! Your input will shape the pop-up demonstration
- **Detail of Risk**
- **Home improvements: landscaping, plumbing, building**

### Wetroit® Flood Assessment Report

On April 22 and April 24, 2014, our Wetroit team—Nick Furtek and Ryan Wilson—conducted a flood assessment of your property. Our assessment included:

- Collection of previous flood experiences
- Observation of the building foundation, basement and landscape
- Camera inspection of the building sewer
- Observation of the adjacent properties and rights-of-ways

Based upon your experience with flooding, the cost of flooding in your neighborhood, and our assessment of your property, we recommend you prioritize the following home improvements:

1. Divert stormwater from entering property at alley
2. Capture rainwater in landscape areas
3. Drain flood water from sidewalk and under porch to catchbasin

### Understanding Your Flood Risk

Homes in the Chicago region are commonly affected by three types of flooding:

- Sewage backup that comes up from floor drains, sinks, tubs, and toilets in your basement,
- Water seepage through floors or walls, or flows through cracks in your building foundation;
- Overland flooding of water that pools in your yard and against your foundation, or flows into your home through window wells and doors.

### Improvements

<table>
<thead>
<tr>
<th>Projects</th>
<th>Measure</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Divert stormwater from entering property at alley.</td>
<td>Install curb (3-4&quot;) along extent of eastern property line at edge of parking pad.</td>
<td>Anticipated Maintenance: N/A Cost Range Estimate: $600-$1,300 Optional: Reconstruction of existing stair. Notes: May require coordination with neighbors to ensure proper diversion.</td>
</tr>
<tr>
<td>2. Capture rainwater in landscape areas</td>
<td>Install rain garden with below-grade storage along eastern edge of patio. Install permeable paving in place of existing patio area to drain to rain garden.</td>
<td>Anticipated Maintenance: Seasonal weeding and care of rain garden. Removal of debris for permeable surface. Cost Range Estimate: $3,600-$4,800</td>
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<tr>
<td>3. Drain flood water from sidewalk and under porch to catchbasin</td>
<td>Clean and repair floor drain. Clean silt and debris from existing catch basin. Install area drain from sidewalk adjacent to south façade to catchbasin</td>
<td>Anticipated Maintenance: Removal of debris contributing to area and floor drains. Cost Range Estimate: $800-$1,200</td>
</tr>
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### Maintenance

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<table>
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<tr>
<th>Total Estimated Cost</th>
<th>$5,000-$7,300</th>
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<tbody>
<tr>
<td>Total Estimated Cost</td>
<td>$300-$700</td>
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</table>
- Bid Solicitation/Construction Oversight
- Pool of Qualified Contractors
- Landscaping, Plumbing, Building improvements
When my property flooded I lost my...

Family room, water heater, college papers, spare bedroom, furniture, garage space.
RainReady Home: $4,850

Cumulative flood damage: $17,000

Upgrades:
- Backwater valve
- Disconnected downspout
- Re-routed gutters
- Rain garden