



City of Des Plaines Repetitive Loss Area Analysis

Prepared by: Jon Duddles, PE, CFM

City of Des Plaines

jduddles@desplaines.org

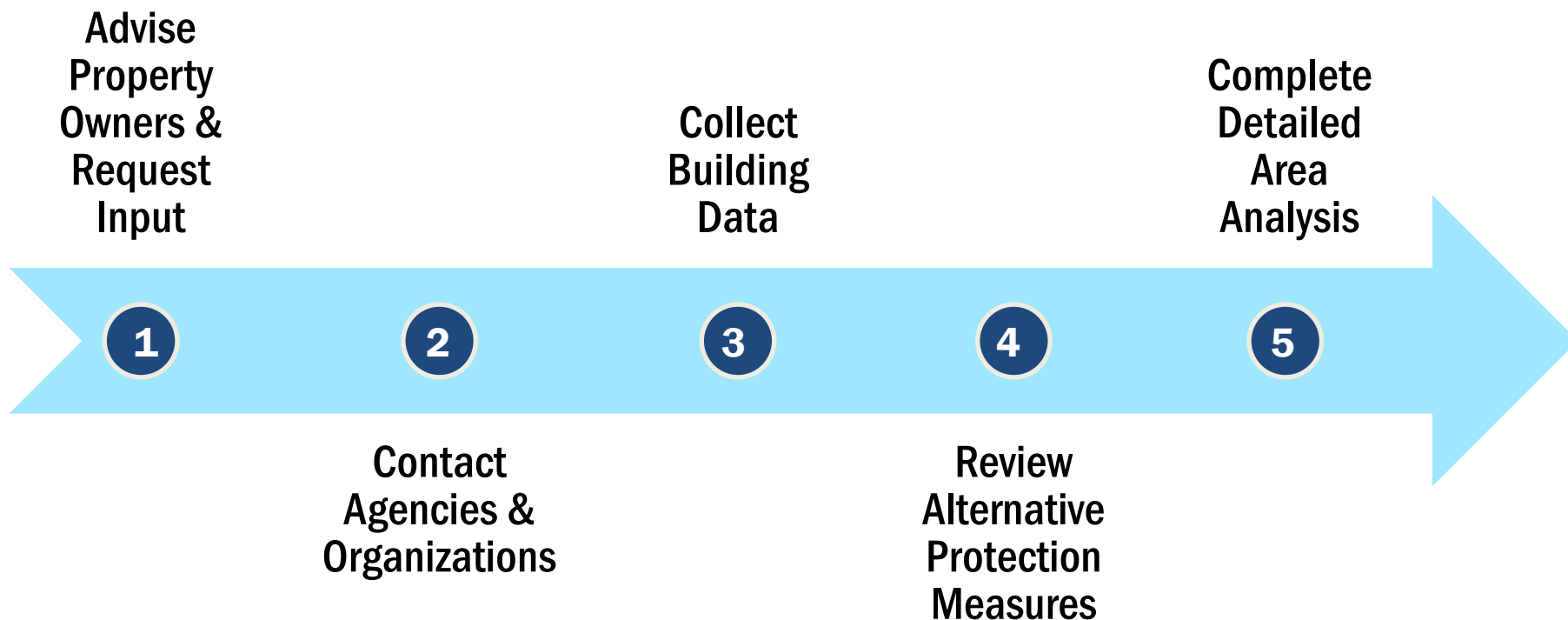
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Date: March 11, 2020

RLAA Process



Request Input – Resident Survey

Property Address: _____ *If you wish to remain anonymous list street and block number, i.e. 1400 block Miner St*

1. How many years have you lived in the home/building at this address?
2. Do you rent or own this home/building? ☐ Rent ☐ Own
3. What type of foundation does the home/building have?
☐ Slab ☐ Crawlspace ☐ Basement ☐ Other _____
4. Has this home/building or property ever been flooded or had a sanitary sewer backup?
☐ Yes ☐ No (If "no" please skip to number 10)
5. Do you have flood insurance: ☐ Yes ☐ No
6. In what year(s) did it flood?
7. Where did you get water and how deep did it get?
☐ In basement: _____ feet deep ☐ In crawl space: _____ feet deep
☐ In first floor: _____ feet deep ☐ In yard: _____ feet deep
☐ Water kept out of house by sand bagging, sewer valve or other protective measure
8. What was the longest time that water stayed in the house/building?
 hours or days. What year did this flooding occur?
9. What do you feel was the cause of your flooding? Check all that affect your home/building.
☐ Storm sewer backup ☐ Sanitary sewer backup ☐ Standing water next to house/building
☐ Drainage from nearby properties ☐ Saturated ground/leaks in basement walls
☐ Overbank flooding from _____ River ☐ Other: _____
10. Have you installed any flood protection measures on the property?
☐ Sump pump ☐ Waterproofed the outside walls ☐ Re-graded yard to keep water away
☐ Moved things out of basement ☐ Installed backup power system/generator ☐ Sandbagged
☐ Other : _____

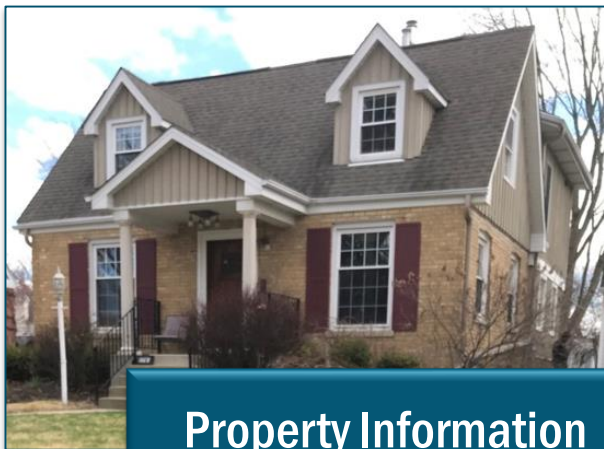
929
Surveys Sent

181
Responses



<https://www.surveymonkey.com/r/VQ9M7DW>

Resident Survey – 4 Sections



Property Information



Flooding History



Flooding Source



Protection Measures

62%
**Experience
Flooding**



86%

Have a below-grade level



76%
**Have flood
protection measures**



Contact Agencies & Organizations



U.S. Army Corps
of Engineers



IDOT

TEMA



CMAP



FEMA



MWRD



Contact Agencies & Organizations

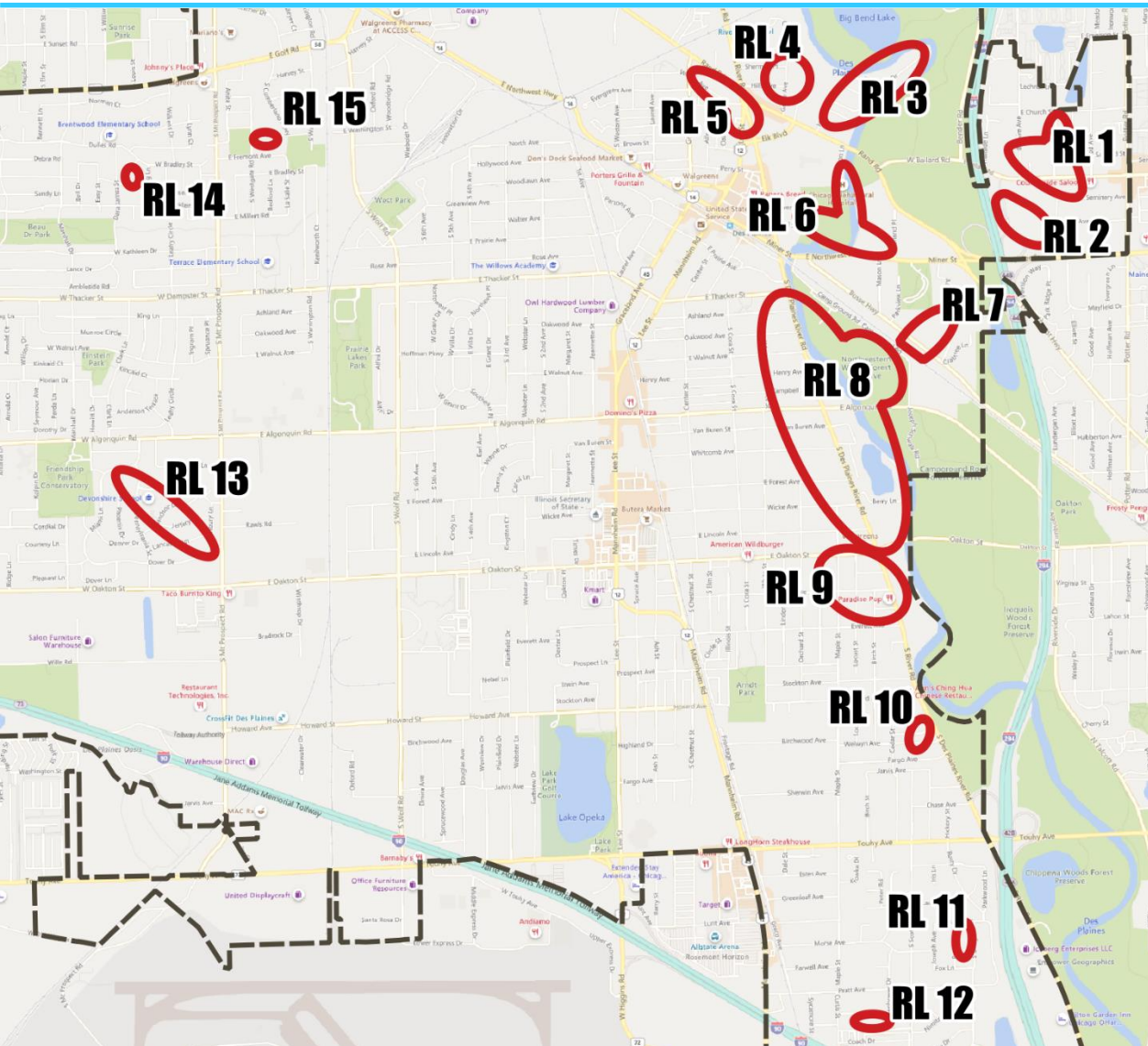


9
Studies

2
City Programs

IDOT Data
Roadway Flooding

Define Repetitive Loss Areas



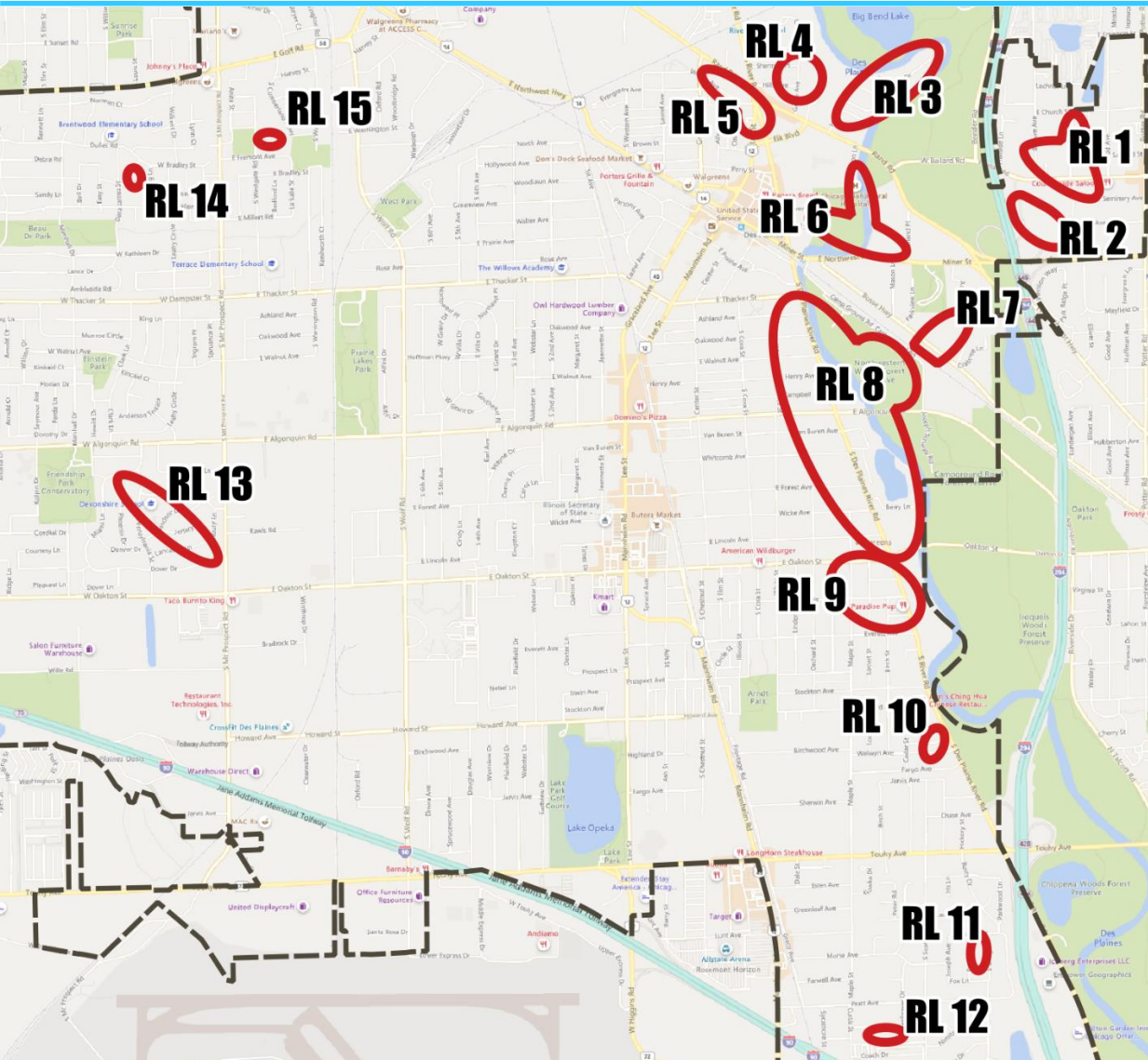
15

**Repetitive
Loss Areas**

245

**Repetitive
Loss Properties**

Define Repetitive Loss Areas

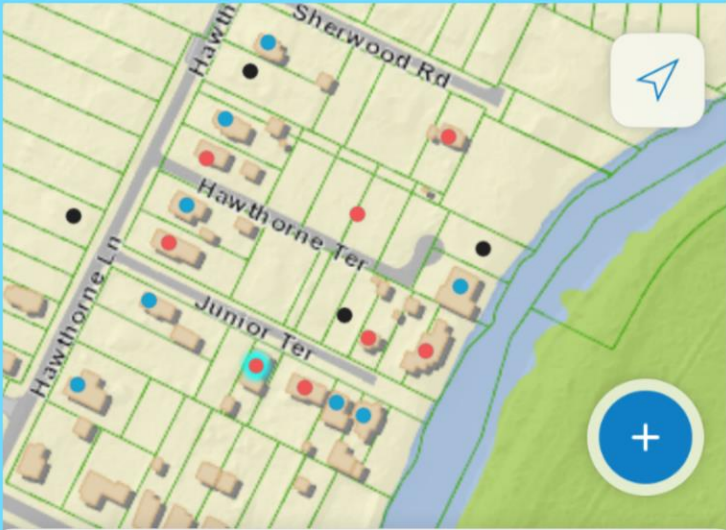


929

**Addresses in
RL Areas**

**Avoided Condo
Buildings
When possible**

Collect Building Data



Address ✕

X, Y Coordinates 2,832 ft

Details **Attached**

Rep Loss Area
RL 3

Address

Muti Unit
-

Building Condition
Fair



Foundation Type
Basement



Location of AC
Side of the house

Elevation of AC
Grounded

Drainage Pattern
To Front

Drainage Direction
NORTH

 **Photo 2.jpg** 403 KB 

 **Photo 1.jpg** 415 KB 

Collect Building Data

[Home](#)
[Gallery](#)
[Map](#)
[Scene](#)
[Groups](#)
[Content](#)
[Organization](#)

Jon Duddles
 jonduddles_DesPlainesIL

Repetitive Loss Collector

[Overview](#)
[Usage](#)
[Settings](#)

Edit Thumbnail

Add to Favorites

Repetitive Loss Collector

Web Map by [bmelvin_DesPlainesIL](#)

Created: Mar 18, 2019 Updated: Aug 20, 2019 View Count: 101

Edit

Description

Add an in-depth description of the item.

Layers

- AGOL_CDP_CUSTOM_Editing - Rep Loss Location
- AGOL_CDP_CUSTOM_Editing - Rep Loss Area
- Community Map
- GISC_MAPOFFICE_Project

[Open in Map Viewer](#)

[Open in ArcGIS Desktop](#)

[Create Presentation](#)

[Create Web App](#)

[Share](#)

Item Information Learn more

Low

High

Top Improvement:
Add a longer summary

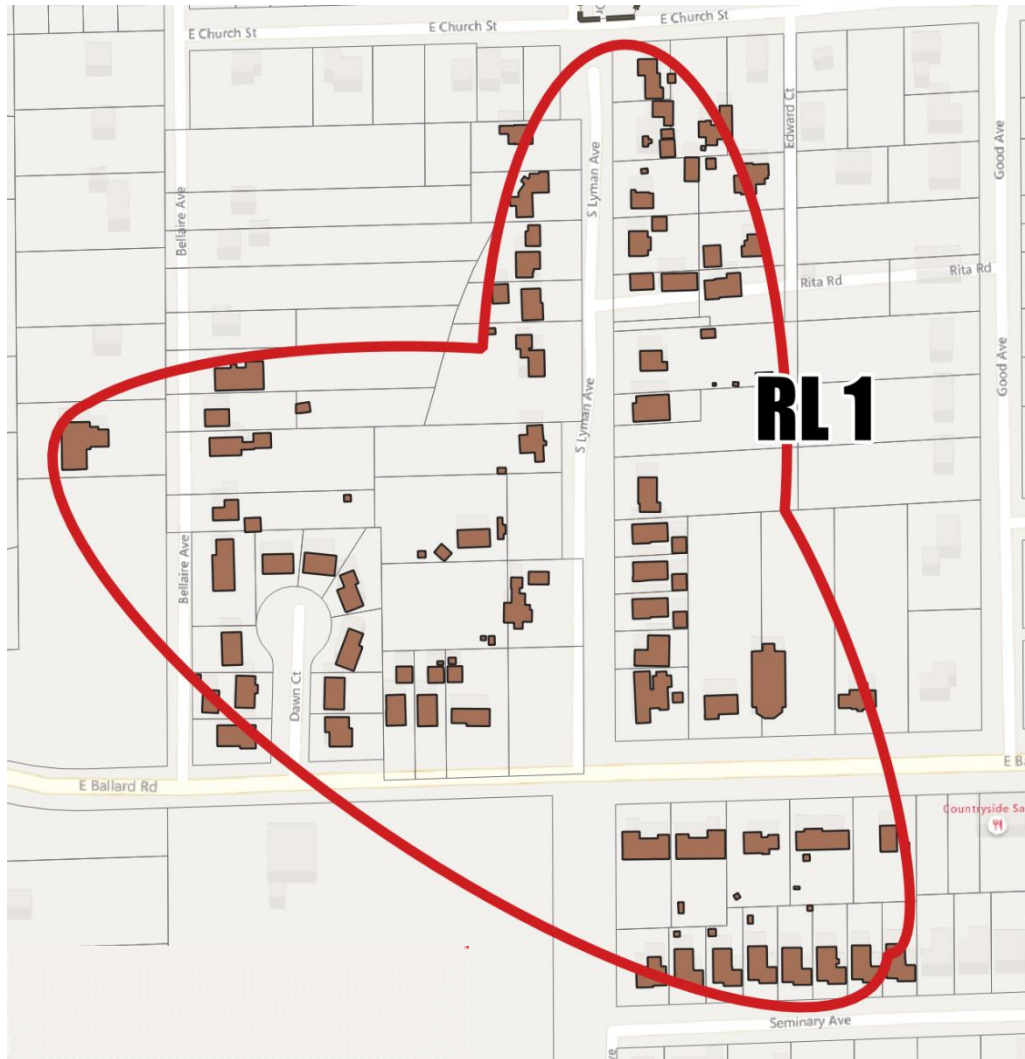
Details

Size: 6 KB

Shared with: [Sidewalk Inspections](#)

★★★★★

Collect Building Data - GIS



Address

Repetitive Loss Area

Building Elevation

Foundation Type

Age of Structure

Collect Building Data – Field Inspection



- **Building Condition**
- **Location of Air Conditioner**
- **Elevation of Air Conditioner**
- **Drainage Pattern**
- **Drainage Direction**
- **Downspouts Drain Away**

Review Alternative Protection Measures

- 1. Non-Structural Measures**
- 2. Green Infrastructure**
- 3. Grading Improvements**
- 4. Plumbing Improvements**
- 5. Wet Floodproofing**
- 6. Dry Floodproofing**
- 7. Elevation, Relocation, and Demolition**

Complete Detailed Area Analysis

Area 3: Big Bend

Repetitive Loss Area 3 is located in the eastern portion of the City, on the west side of I-294. This area is within the Des Plaines River watershed. The area is bounded by the Des Plaines River on the north and east, Rand Road on the south, and Hawthorne Lane on the west as shown in Figure 10.

The properties within this area are all located within the regulatory floodway of the Des Plaines River. The applicable flood data for this area is summarized below:

Source of Flooding: Des Plaines River
FIRM Zone: AE
Approx. Base Flood Elevation: 634.2
Velocity: 0.7 fps
Warning time: 1 day

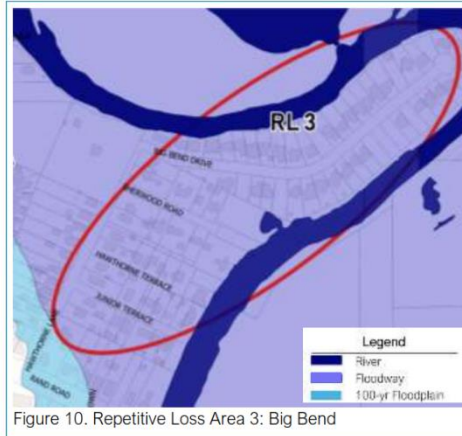


Figure 10. Repetitive Loss Area 3: Big Bend

There are 34 single family homes in this area, which are located within the regulatory floodway of the Des Plaines River. The homes are primarily on basement foundations. The terrain in the area is very flat with ground elevations ranging between 630 near the river and 632 further away from the river.

Questionnaire Responses:

Eight (8) questionnaires were returned from this area. Seven of the eight respondents indicated they have experienced flooding. Flooding was reported in the following years: 1986, 1987, 1996, 2008, 2013, and 2017. The flooding was reported to be in yards, crawlspaces, basements, and first floors with the longest duration of flooding lasting at least 5 days (some could not remember the duration of flooding). Residents have used sand bags, installed sump pumps, and installed generators. The City is aware of flooding in this area and has a buyout program to acquire and demolish flood-prone properties. City staff noted several generators and raised window wells in this area as shown in Figure 11.



Figure 11. Generator and Raised Window Wells in RL 3. As shown above, residents in this area have generators and raised window wells to protect their homes from flooding.








RL Area description

Floodplain Info.

Questionnaire Responses

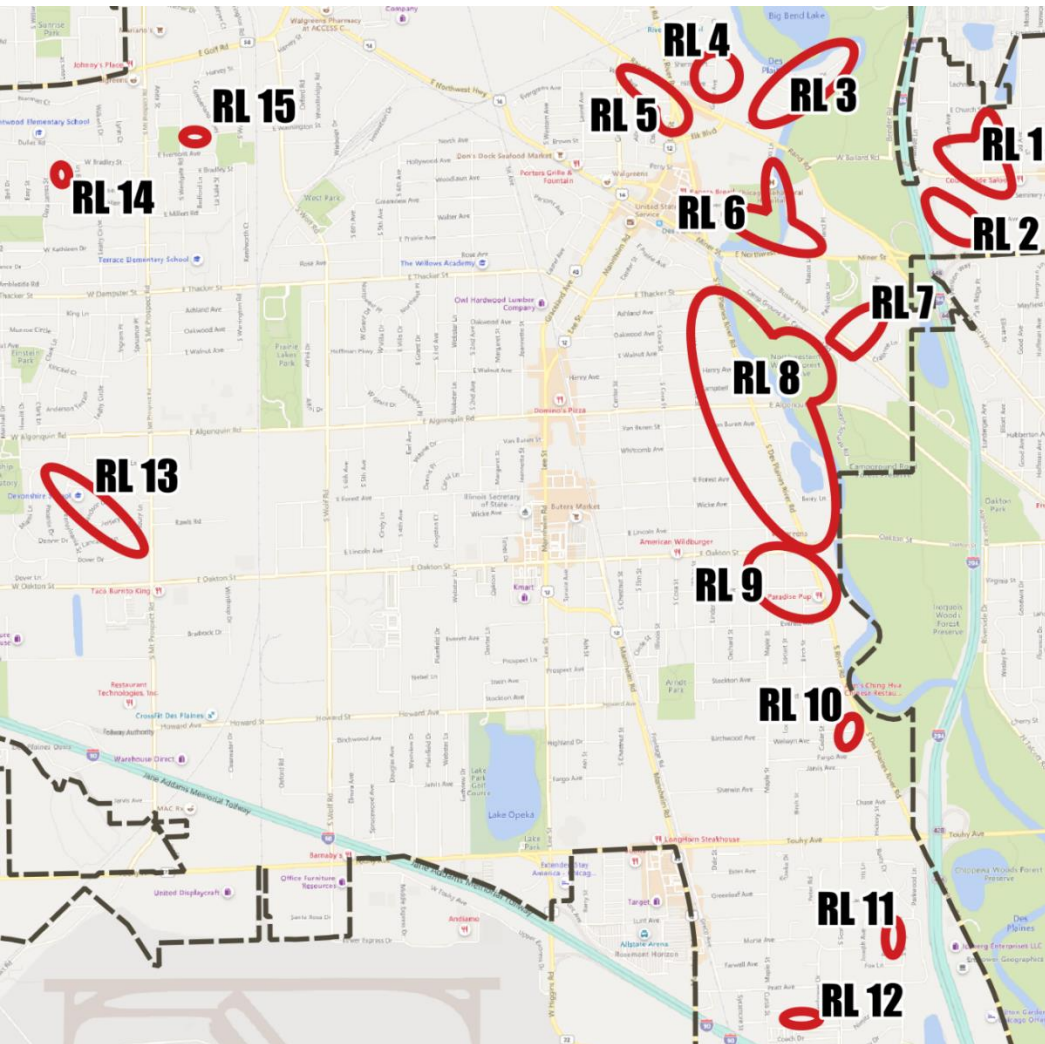
Representative Photos

Property Photos

 Address1_Image1	 Address1_Image2	 Address1_Image3
 Address2_Image1	 Address2_Image2	 Address2_Image3
 Address3_Image1	 Address3_Image2	 Address3_Image3
 Address4_Image1	 Address4_Image2	 Address4_Image3
 Address5_Image1	 Address5_Image2	 Address5_Image3

- **Associated image with parcel**
- **Labeled images with address**
- **Printed all images in a grid**
- **Included image label under image**
- **Sorted by address/ image label**
- **Images included in attachment (not for public release)**

Lessons Learned



- More, smaller RL Areas
- Use GIS to reduce effort
- Survey indicated severity of flooding
- Mitigation options based on:
 - RL Area
 - depth of flooding

Questions?



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