Repetitive Loss Area Analysis
Why You Need One

IAFSM Conference
March 2020

Repetitive Loss Area Analysis (RLAA)

- A mitigation plan for areas that have or are expected to experience repeated losses from flooding.
- The purpose is to generate mitigation solutions for individual buildings or areas

NATIONAL FLOOD INSURANCE PROGRAM

RL Property - 2 claims greater than $1,000 in any 10-year period since 1978

CRS – 500 Series Flood Damage Reduction

RLAA – Maximum Credit 140

Communities with 50 or more RL properties **must** complete either a RLAA or a Floodplain Management Plan. (Category C Community)

<u>RLAA can be completed by any community with at least 1 RL property</u>

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Repetitive Loss Requirements
Category C

- Everything done for Category B

  AND

- **Prepare and adopt a Repetitive Loss Area Analysis (RLAA – Max. 140 pts)**

  or

- Prepare and adopt a Floodplain Management Plan (Max. 382 pts) that includes a review of ALL RL AREAS and flood insurance claims.

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Repetitive Loss Area Analysis - CRS

- **Map the RL Properties and Area/Areas**
- **5-Step Planning Process**

  Step 1 **Contact Property Owners**

  Step 2 Contact Other Agencies – MWRD, county, IDNR, ACOE, etc.

  Step 3 **Collect Data**

  Step 4 **Consider Mitigation Alternatives**

  Step 5 Document the findings

- **Plan Approval**/ Annual Evaluation

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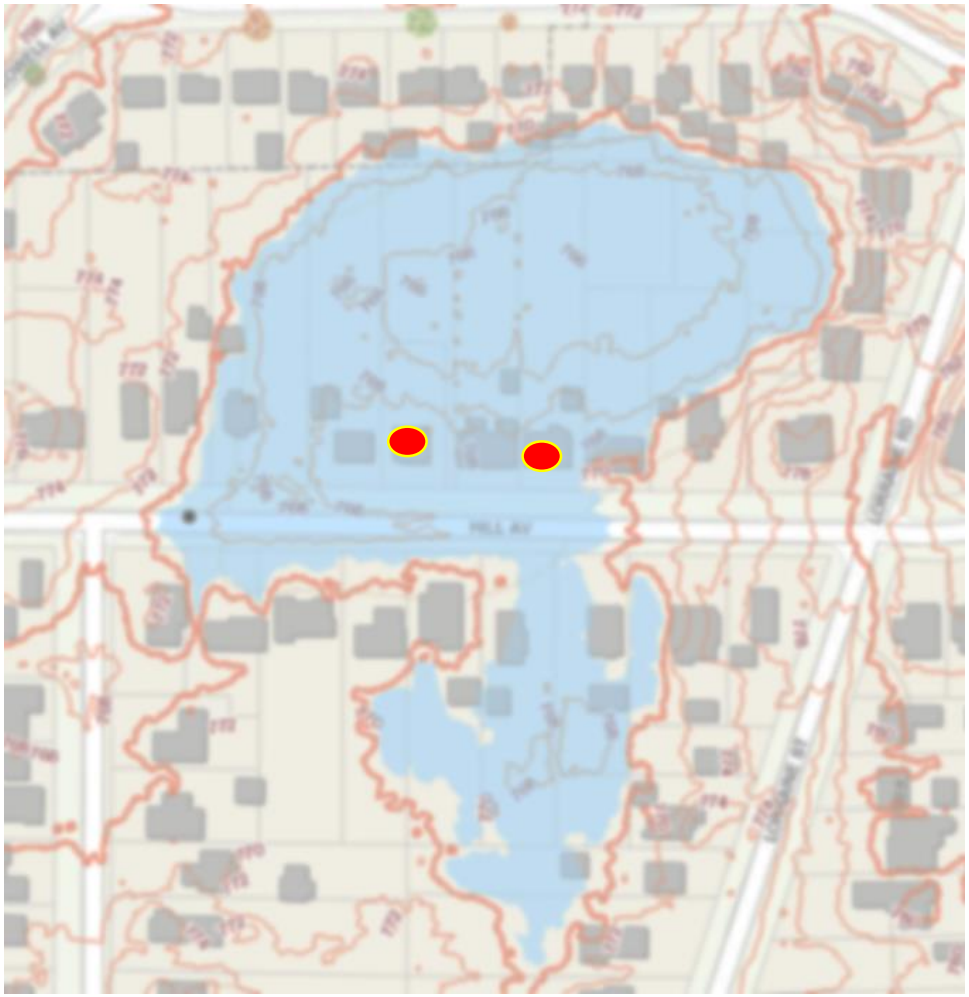
RL Mapping

- Review the RL properties for accuracy
- Review all claims data
- Map the RL properties and all properties with claims
- Overlay topo/storm sewer atlas
- Visit the area



Mapping the RL Area

Why does each RL structure flood?

- Look at topography; overflow route, floodplain, or depressional area?
- Look at claim data – basement/ minor flooding or major first floor
- Is it unique or are there other buildings equally at risk?
  - Below grade garage/patio?
  - Window well in side yard?
  - In higher frequency floodplain, i.e. 10-yr?
  - In depression with no outlet?

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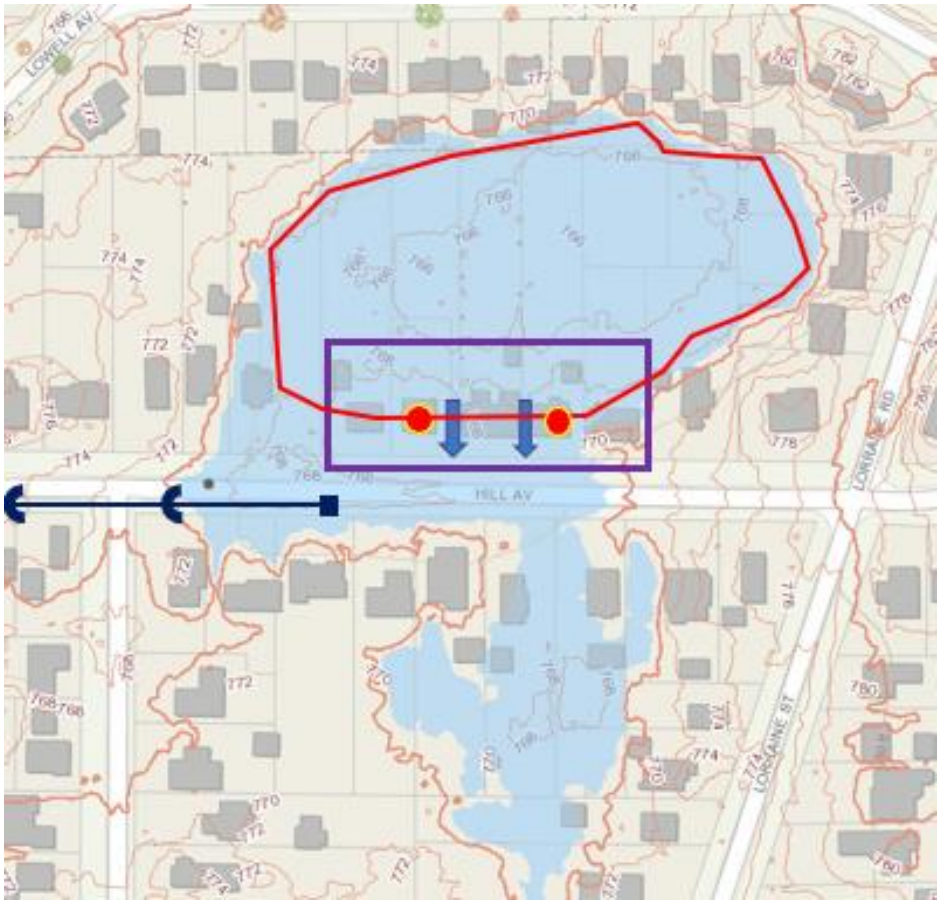
Map the Area – Similarly Situated



Zone A

Storm sewer in street

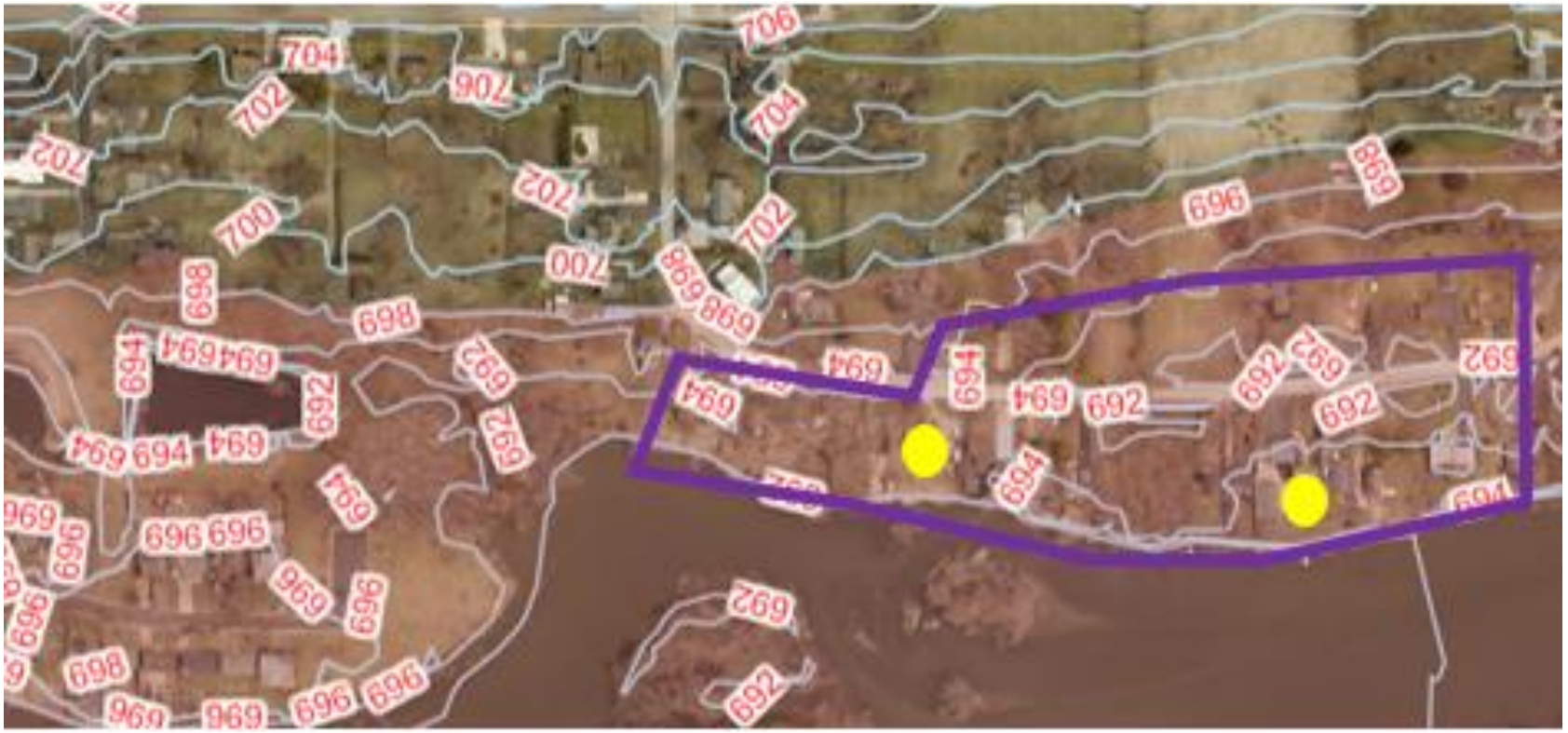
Depressional areas north and south of street with no storm sewer

Interviewed owners

- Overflow between homes
- Homes flooded through window wells elevation 768

5 homes have similar risk

Map the Area – Similarly Situated



BFE - 698.5 to 697.5

10-yr – 695

RLAA defined as area by elevation 695 or lower

Repetitive Loss Area Analysis - CRS

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RLAA Planning Step 1 - Contact Property Owners

Critical step to truly get at the repetitive nature of the flooding

- Use **post cards**, weekly e-newsletters, and social media
- Online Survey and Paper Survey – older residents/ no computer access
- Public Meeting

RLAA Planning Step 3 Data Collection

Visit each property, take photos and collect data

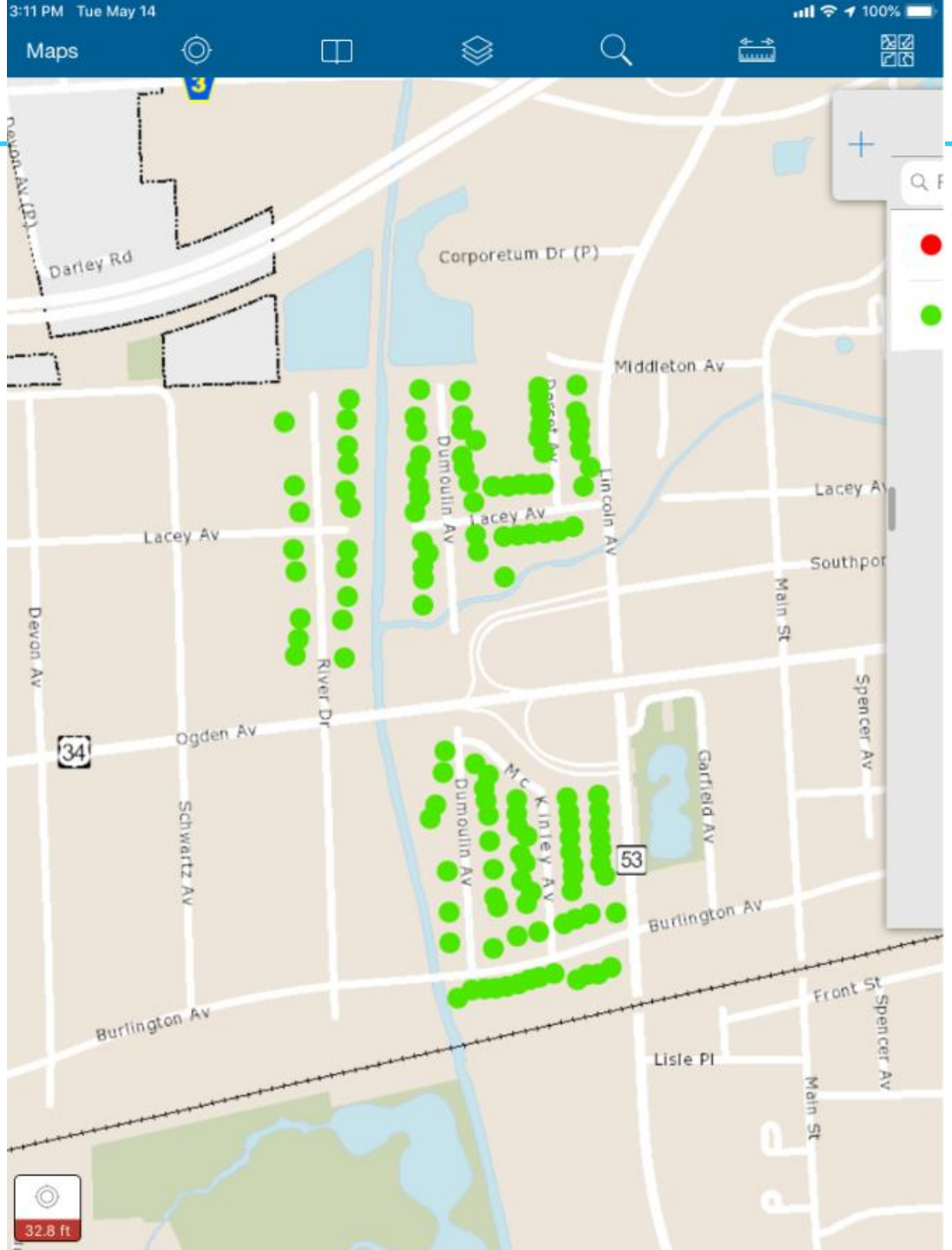
Use Data Collector Apps

- Collector Classic – ArcGIS - map based
- Survey 123 – ArcGIS – form based
- Fulcrum – map based
- Open Source options
- Simple spreadsheet

Survey Collection

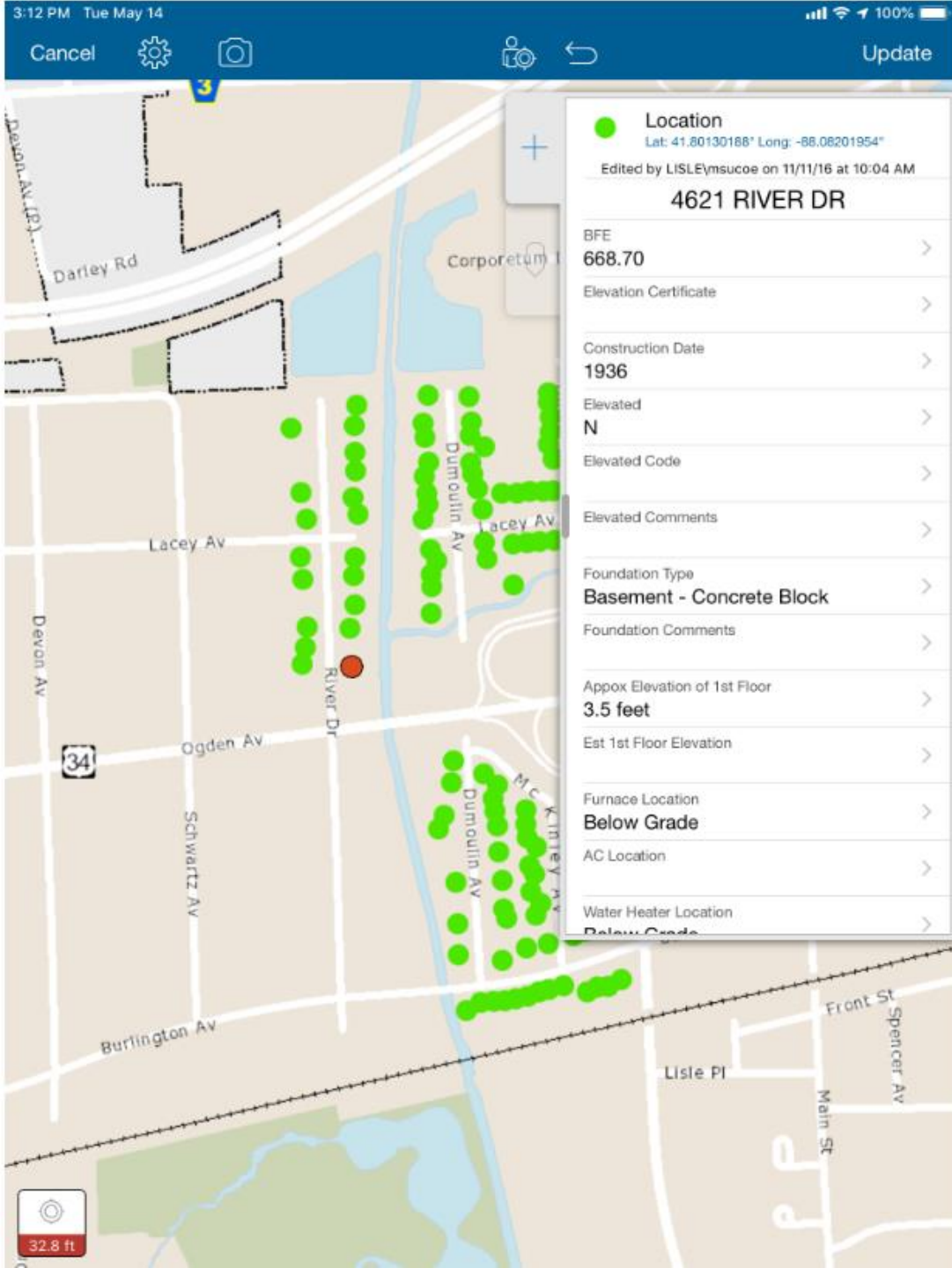
Example -

- Collector Classic ArcGIS
- Red/Green dots show incomplete/complete
- Used I-pad with wi-fi connection



Survey Collection

- Lowest adjacent grade
- BFE
- Foundation type
- Depth/height of lowest floor and first floor to outside grade
- Location of furnace, A/C, water heater
- Recommended mitigation
- Photos



Survey Collection

Street No	Address	BFE	Foundation Comments	Approx 1st Floor Elevation	Est 1st Floor Elevation	Furnace Location	AC Location	Water Heater	Mitigation
1401	BURLINGTON AVE	665.75	basement, concrete block	3.3	665.8	basement		basement	Elevate wh furnace and ac
1403	BURLINGTON AVE	665.75	basement, concrete block	4.1	0	basement in ceiling		basement	Elevate wh furnace and ac
1404	BURLINGTON AVE	665.9	elevated, poured concrete		0	2nd level		2nd level	ELEVATED
1405	BURLINGTON AVE	665.7	basement, concrete block	2.5/3.5	0	basement		basement	Elevate home/ wh furnace and ac
1407	BURLINGTON AVE	0	crawlspace		0				Scheduled for demolition
1409	BURLINGTON AVE	0	crawlspace	1.5	665.5	crawlspace			DEMOLISHED
1411	BURLINGTON AVE	665.7	basement, concrete block	2.75	0	basement		basement	Elevation recommended
1413	BURLINGTON AVE	665.7	basement	0.5	663	basement			DEMOLISHED

RLAA Planning Step 4 Consider Mitigation Alternatives – Consider Unique Solutions

- Enclose lower level garage and grant a variance to front yard setback for new attached garage
- Road closures to stop wake from cars pushing water into over door thresholds and into window wells
- Tree trimming to stop power outages that cause sump pump outages
- Develop guidance for floodproofing homes and hold workshops
- Annual meeting discussing flood insurance
- Storm sewer extensions
- Adopt-a-drain program
- Improve stream maintenance

Homeowners Floodproofing Workshop

- Welcome!
- About Lake County
- Drainage Evaluation
- Structural Floodproofing Measures

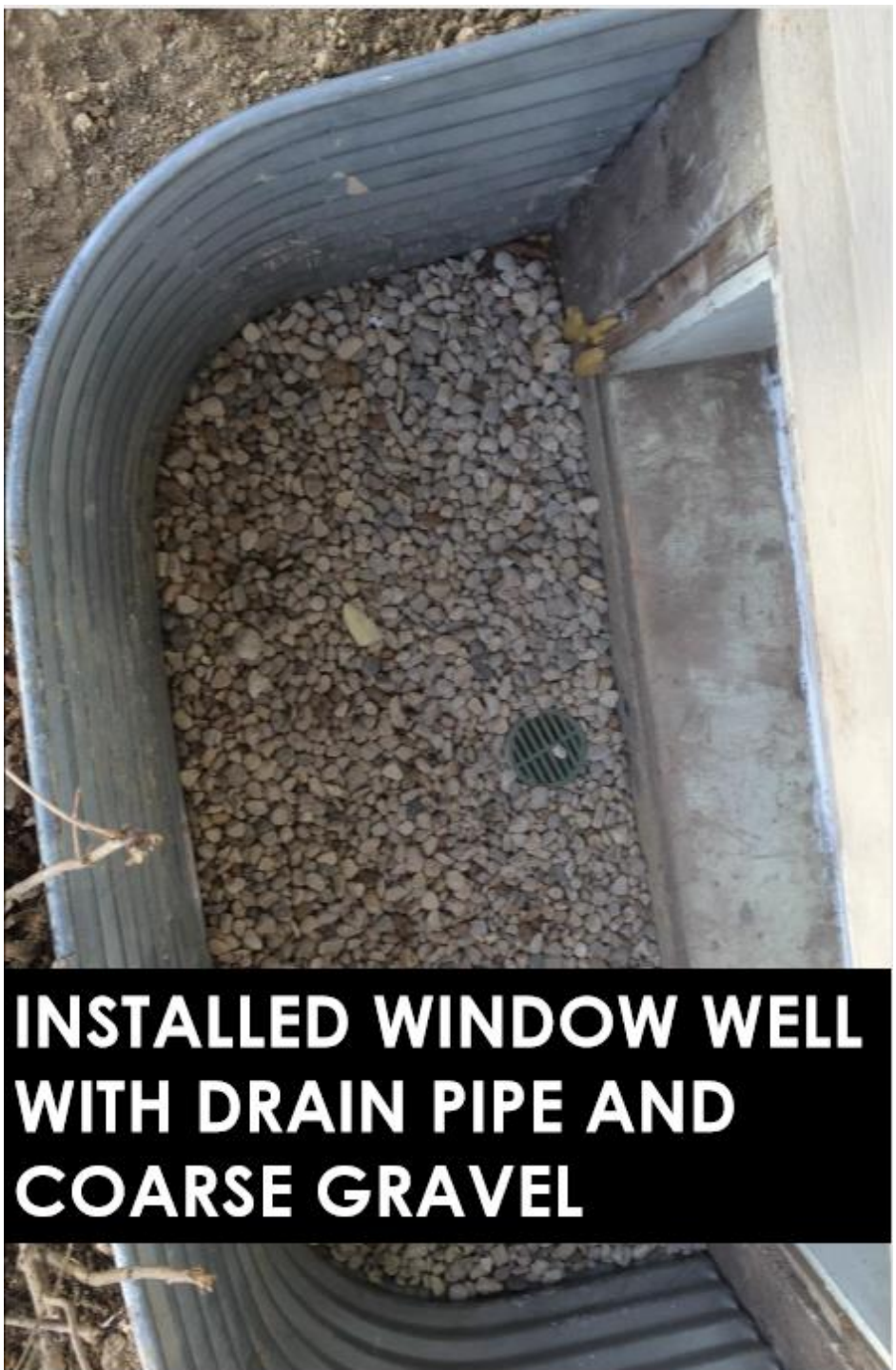
KURT WOOLFORD, P.E., CFM

CHIEF ENGINEER

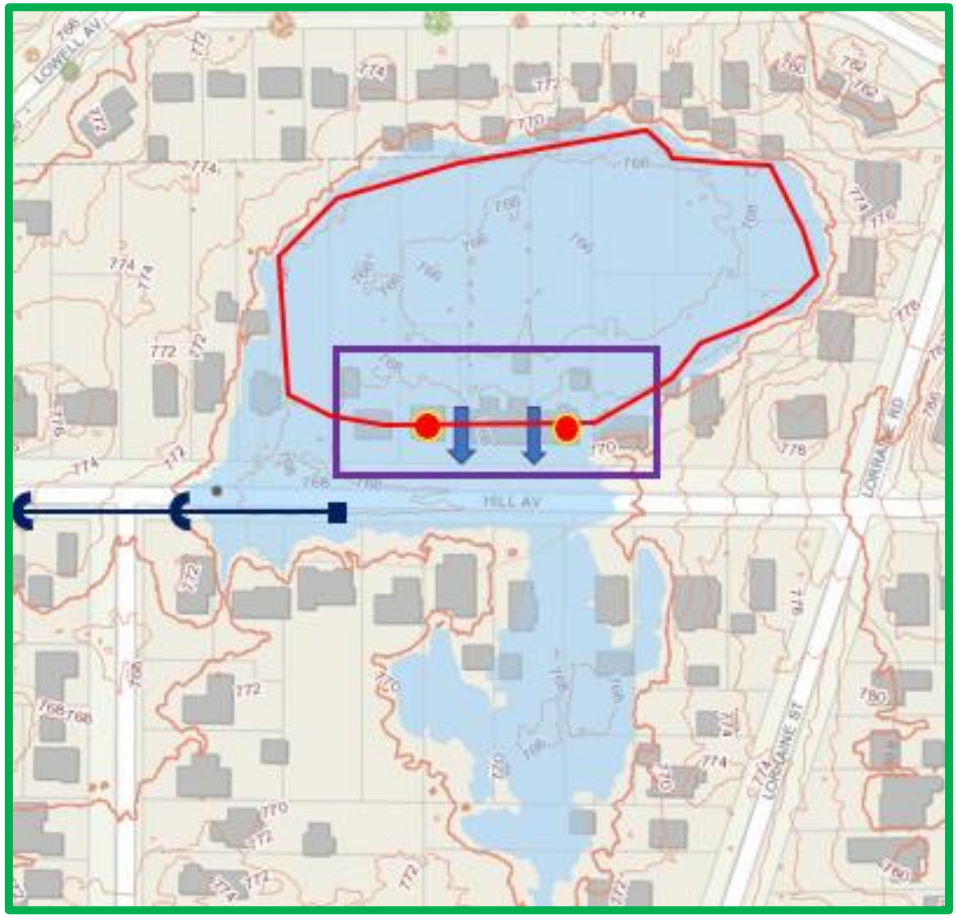
LAKE COUNTY

STORMWATER MANAGEMENT COMMISSION


EXCAVATED TRENCH
FOR DRAIN TILE AND
WINDOW WELL


INSTALLED WINDOW WELL
WITH DRAIN PIPE AND
COARSE GRAVEL

RLA - Recommendation



Depressional areas north and south of street with no storm sewer

Interviewed owners

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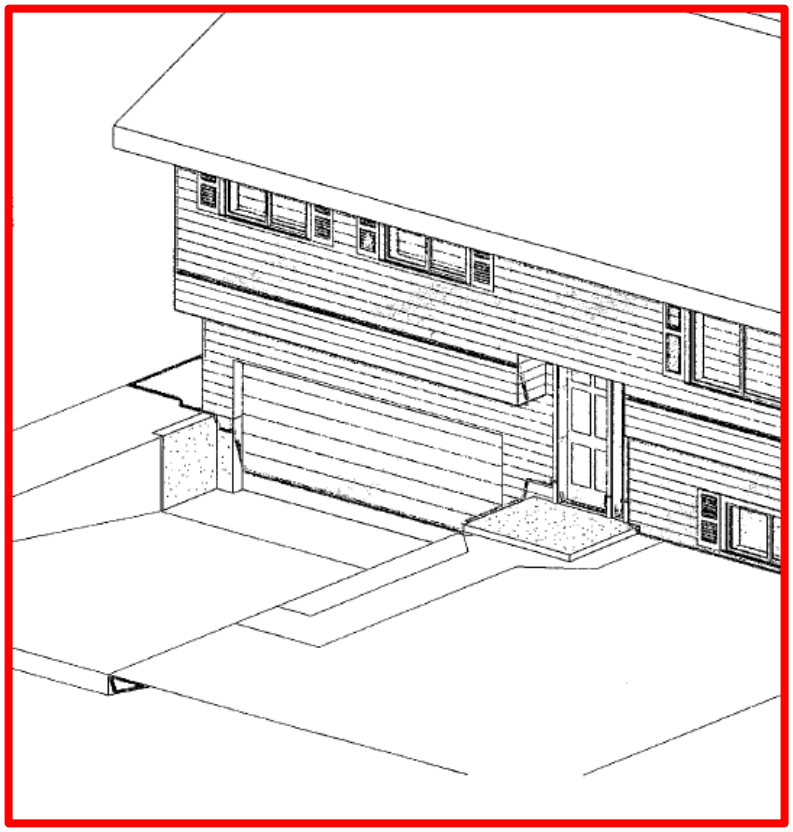
Mitigation - storm sewer extension and meet with homeowners and discuss window well protection, generators and tile drain/sump pump

RLA - Recommendation



Rep Loss property - Below grade garage at a local depressional area, no designated floodplain

Removed garage door and backfilled depressed driveway

Rep Loss Area Analysis vs Multi-Hazard Plan

Repetitive Loss Area Analysis

- Street level/specific structure detail
- Direct engagement with community's residents and officials
- Tool for targeting/prioritizing mitigation dollars
- Value goes beyond CRS credit

Multi-Hazard Plan

- Often multi-jurisdictional
- Large scope with no detailed rep loss/ historic flood claim review for each community
- Generic mitigation alternatives for flooding
- Little to no community involvement

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Rep Loss Area Analysis vs Multi-Hazard Plan

Repetitive Loss Area Analysis

- CRS Coordinator is in control to ensure all steps are completed to gain the maximum points

Multi-Hazard Plan

- If your community misses a single planning meeting you will lose all credit
- Often misses critical planning steps leading to minimal or no points for CRS community

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Conclusion

Repetitive Loss Area Analysis benefits a community beyond the CRS credit

Communities should use this opportunity to really speak to residents about their flooding

Look for why a property is **repetitively** flooded

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