Repetitive Loss Area #30

Fred Creek
E. 75th St. & S. Jamestown Ave. Area

August 17, 2017

Flanagan & Associates, LLC
Planning Consultants

SWIFT WATER RESOURCES ENGINEERING, LLC
9 East 4th Street • Suite 301 • Tulsa, OK 74103 918-582-1380 • swre@sbcglobal.net

Bill Robison, P.E., CFM
Engineering Services

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August 17, 2017

Dear Resident/Property Owner:

Once considered the most flood-prone city in America, Tulsa has worked hard to reduce or eliminate flooding of its homes and neighborhoods. The City joined the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) in 1974 and through decades of effort is now recognized as a national leader in flood hazard mitigation. As a result, property owners in Tulsa receive as much as 40% discount on their flood insurance.

A key component of the NFIP has been its focus on Repetitive Loss Properties, which make up only 1 percent of insured properties, but account for over 30 percent of flood insurance claims payments. A Repetitive Loss Property is defined by FEMA as any property that has been paid two or more flood insurance claims of $1,000 or more in a 10-year time period.

The NFIP recently expanded its flood hazard mitigation program to include the identification of "Repetitive Loss Areas" (RLA)—those properties near an existing Repetitive Loss Property that may be subject to the same general flooding conditions. In most instances, 95% of the properties in an RLA will never have experienced flooding—especially if the cause of damage is shallow, overland flow due to local drainage conditions. Once the City has identified an RLA, we are required to contact the owners and residents of the area and work together to develop a plan to reduce or eliminate flooding in the neighborhood.

Your property has been identified as being in a Repetitive Loss Area. We want to re-emphasize that this does not mean your property has flooded or is even likely to flood—only that it is in the same area, and in a similar geographical situation, as an existing Repetitive Loss Property.

You can protect your property from flooding. We would like to invite you to participate in our flood prevention and mitigation efforts for your neighborhood. We need your input. What can we do, working together, to eliminate potential flood losses in your area? We look forward to hearing from you.

To learn more about your risk of flooding visit www.floodsmart.gov or contact the City of Tulsa Customer Care Center at (918) 596-7777.

Sincerely,
CITY OF TULSA, ENGINEERING SERVICES

Bill Robison

Bill Robison, P.E., CFM
Senior Special Projects Engineer
Stormwater Project Coordination

Contents

Acknowledgements iii
Overview 1

I. Background 1

II. Location 3

III. History 5
Development 5
Flooding 5
Improvements 5

IV. Research and Analysis 5
Agencies and Organizations 6
Plans, Studies and Documents 6
Capital Improvements Plans 7
Flood Insurance Data 7
Claims Data. 7
Field Surveys and Site Visits 7
Review Drainage Patterns. 7
Structures 7
Structure Type. 7
Foundation Type. 7
Condition of Structures. 8
Notification 8
Annual Floodplain Notification 8
Annual Repetitive Loss Area Notification 8
Property Owners/Residents Notification 8
Public Participation and Involvement 8
Property Owner Response to Notifications 8
Conclusions 8

V. Mitigation Measures 9
Overview 9
Individual Flood Protection Measures. What You Can Do 9
Know and Understand Your Flood Risk 9
Make a Disaster Preparedness Plan 10
Create Berms, Swales or Redirected Drainage 10
Install Local, Property-Specific Paving, Plantings and Catchment Basins 10
Acquisition 10
Elevate Your Structure 10
Dry Floodproof Your Structure 10
Wet Floodproof Your Building 11

Wet Floodproof Your Garage 11
Elevate Damage-Prone Components 11
Correct Sewer Backup Problems 11
Maintain Nearby Streams, Ditches, and Storm Drains 11
Purchase and Maintain Flood Insurance 11
Repetitive Loss Area Mitigation Measures: What the City Can Do 11

VI. Funding 12

VII. Conclusions and Recommendations 12

Acknowledgements

The City of Tulsa Repetitive Loss Area Analysis Plans were developed by Engineering Services with local funding from the City of Tulsa in compliance with the Federal Emergency Management Agency's Community Rating System's requirements. Numerous agencies, departments, organizations and individuals participated in these studies, including:

City of Tulsa Elected Officials

G.T. Bynum	Mayor
Vanessa Hall Harper	City Council District 1
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Matt Leichti, P.E.	Manager, Project Coordination
Bill Robison, P.E., CFM	Project Manager
Brad Jackson, P.E., CFM	Lead Engineer, Stormwater Design
Laura Hendrix, CFM	Floodplain Administrator
Tim Lovell	Disaster Resilience Network
Angela King	Records Custodian

Consultants

Flanagan & Associates, LLC
Planning Consultants
3015 E. Skelly Drive, Suite 430
Tulsa, Oklahoma 74105
(918) 749-2696 www.rdflanagan.com

Ronald D. Flanagan, CFM, Principal
John D. Flanagan, Research, Writing
Tyler Brooks, GIS Specialist
Nancy K. Edwards, Administration

Swift Water Resources Engineering, LLC
Hydrologic Engineering Consultants
9 East 4th Street, Suite 301
Tulsa, Oklahoma 74103
(918) 582-1380 swre@sbcglobal.net

Mark Swift, P.E., CFM
Angela Swift, CPA, CEO

Repetitive Loss Area # 30

Fred Creek
E. 75th St. & S. Jamestown Ave. Area

Overview

Repetitive Loss Area (RLA) #30 is comprised of five properties in the Denwood Estates Addition. The neighborhood is situated in the Fred Creek drainage, along E. 75th St., between S. Indianapolis and S. Jamestown Aves., about 800 feet south of Fred Creek itself. The neighborhood is built on a west facing hillside, with the land rising to the south and east to high ground around E. 77th St. and S Marion Ave. The RLA contains five upscale, ranch-style, one- and two-story single-family residences built between 1942 and 1978. One home has a conventional foundation, while the other four are slab-on-grade. All properties are currently in Good condition. The Repetitive Loss residence, which is one of the slab-on-grade structures, has made two claims for flood damage, on June 17, 1980 and October 4, 1986, for a total of $5,022. All but $120 of the damage was structural.

The Repetitive Loss Property was the original residence in the area, built in 1942, decades before the development of Denwood Estates in the late 1960's and 1970s. Before development, runoff from the high ground along Marion Ave. flowed to the north-northwest via three shallow swales to join Fred Creek at about E. 74th and Indianapolis Ave. One of these original swales carried runoff past the east side of the Repetitive Loss Property, before following S. Jamestown Ave. to Fred Creek. Site drainage patterns changed with the construction of Denwood Estates, but the general drainage course remained largely the same. Overland flow down this original swale past the east side of RLA #30 has been the primary source of flood damage.

The general location of RLA #30 is shown on the map on Page 2 and on the more detailed photo/topography map on Page 4. The detailed map identifies residential properties, County Assessor parcels, floodplains and the existing storm sewers system.

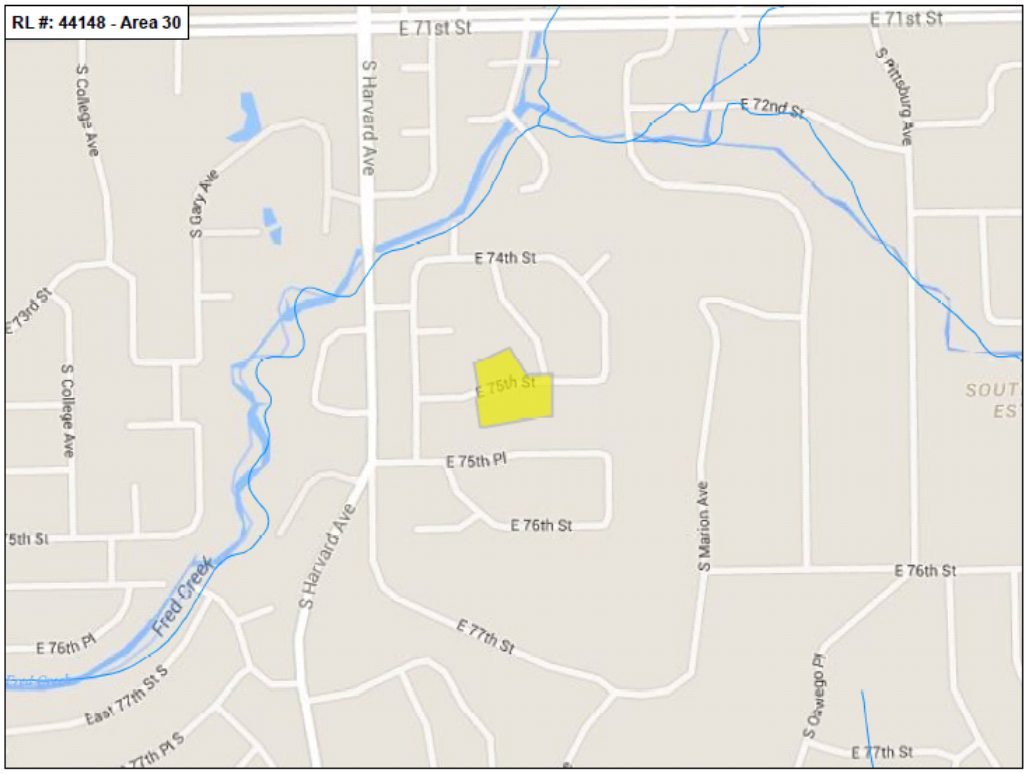
I. Background

During the post-World War building boom of the 1950s and 1960s, Tulsa expanded rapidly east and south into the basins of Mingo, Joe and Fred creeks. Because of the city's climate and the broad floodplains along these creeks, this growth brought with it an increased risk of flooding. And indeed, by the mid-1980s floods were occurring almost yearly and flooding had become Tulsa's most destructive natural hazard. One researcher at the time declared Tulsa "the most flood-prone community in the nation."

Tulsa was not unique in its rapid post-war development and attendant risks. Cities across America were experiencing similar problems as they spread out into prosperous subdivisions. In response, the U.S. Congress created the National Flood Insurance Program (NFIP) in 1968 to help property owners protect themselves from flood losses. The NFIP offered flood insurance to homeowners, renters, and businesses if their

community participated in the NFIP and agreed to adopt and enforce ordinances that met or exceeded FEMA requirements for reducing the risk of flooding.

Tulsa joined the NFIP in 1974, and through great effort and considerable expense has significantly reduced its exposure to flooding. As a result, Tulsa has been awarded a Class II rating in the NFIP's Community Rating System (CRS), which grants its residents a 40 percent discount on the cost of flood insurance for structures in the Special Flood Hazard Area (SFHA), also known as the 1% or 100-year floodplain. Since the Biggert-Waters Flood Insurance Reform Act of 2012, many properties have seen a substantial increase in their premiums, making this discount even more important.



RLA #30 is located at along E. 75th St., between S. Indianapolis Ave. and S. Jamestown Ave.

For its part, the NFIP is continually faced with the job of paying claims while trying to keep the price of flood insurance at an affordable level. Properties that flood repeatedly—known as "repetitive loss properties," have been a particular problem for the program: Although they make up only 1 percent of insured properties, they account for one-third of all claims payments (about $200 million per year, or $4.5 billion to date). A repetitive loss property is defined by FEMA as any property that has been paid two or more flood insurance claims of $1,000 or more in a 10-year time period.

Consequently, one of the requirements of the CRS is that communities identify all repetitive loss properties in their jurisdiction and work with the owners to find ways to reduce or eliminate future flood damage. This initiative has been very successful in reducing flood losses and claims.

FEMA has recently extended its repetitive loss program to include "Repetitive Loss Areas" (RLA). To maintain a Class II rating in the CRS, Tulsa is now required to analyze the area surrounding each of its repetitive loss properties and identify any neighboring properties (including uninsured ones) that may be subject to the same general flooding conditions. This group of nearby properties is then designated an "RLA." The City is required to contact the owners of the properties in the RLA, inform them that they are located in an area subject to flooding, and develop a plan for mitigating or eliminating flooding in the area, much as has been done for the individual repetitive loss properties.

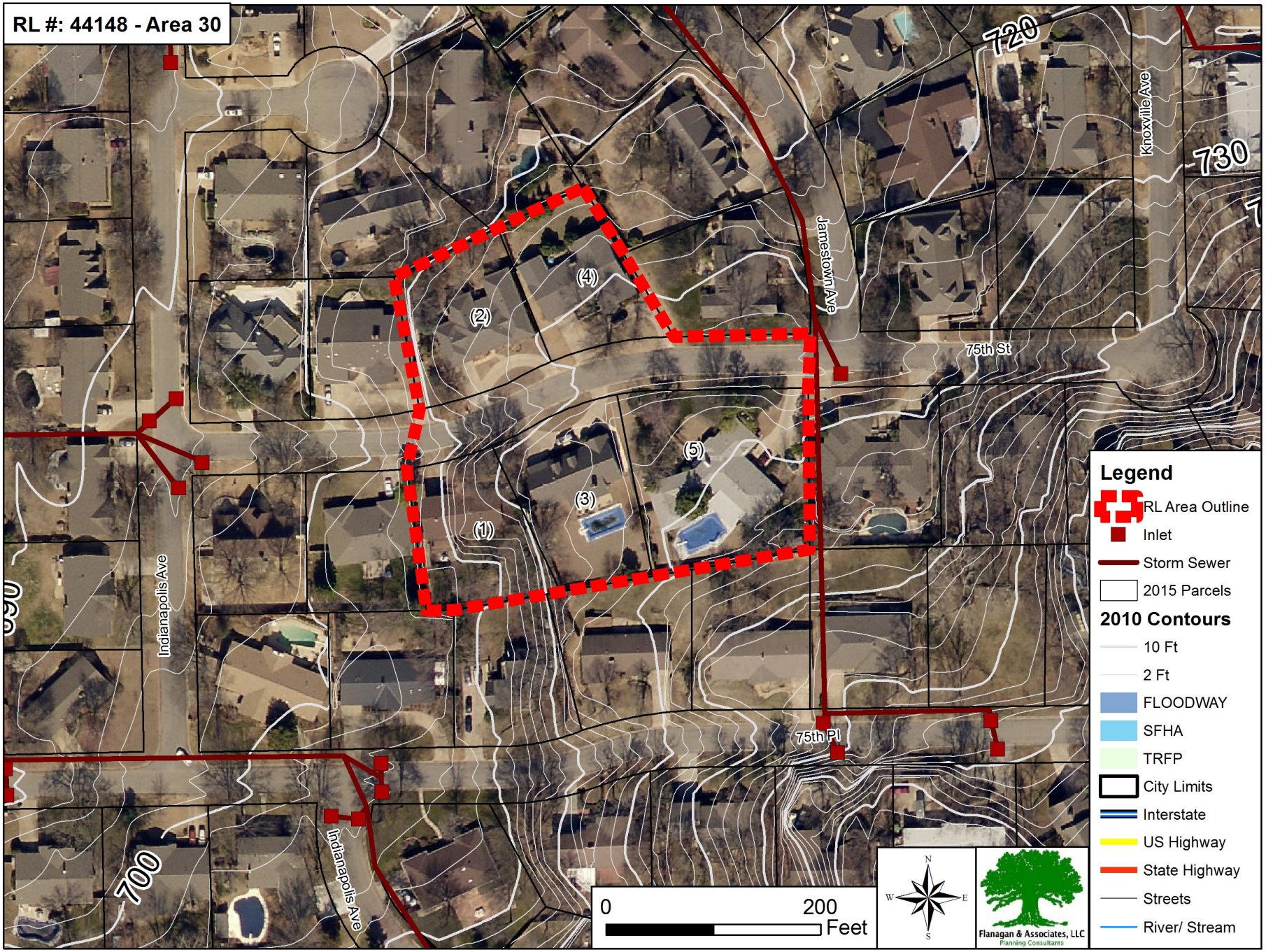
It is important to note that most of the homes in a Repetitive Loss Area—perhaps as many as 80% or 90%—may not have experienced flooding of any kind. What they have in common is being subject to the same general geographical and flood conditions as the nearby repetitive loss property. It should also be stressed that the flooding events in question may have had little or nothing to do with overflow from a creek, but perhaps may have been the result of storm sewer backup or overland flow from a neighbor's property into a low-lying, slab-on-grade home or garage. The location of RLA #30 is shown on the aerial photo/topography map on page 4, below. The map identifies residential properties, County Assessor parcels, floodplains and the existing storm drainage system.

II. Location

The Fred Creek is a 4.5-mile-long, left-bank tributary to the Arkansas River that drains 3.76-square-miles of southeast Tulsa. The creek rises in five principal branches at about the 750-ft. contour in the south Tulsa hills, near E. 69th St. and S. Columbia Ave., E. 67th and S. Florence Ave., E. 66th and S. Marion Ave., E. 68th and S. Yale Ave., and E. 73rd and Yale Ave. The stream flows generally to the south and west through fully developed neighborhoods and across the campus of Oral Roberts University, to join the Arkansas River at about E. 83rd and Riverside Dr. The creek has been channelized through much of its lower reaches. Four former tributaries of Joe Creek have been rerouted to join Fred Creek near E. 78th and S. Lewis Ave., and Fred Creek's mainstem itself has been re-channeled to meet the Arkansas River at E. 83rd St., rather than following its original course to join the river near E. 91st St. and Riverside Dr.

Repetitive Loss Area #30 is located in the Fred Creek basin, about 800 feet south-southeast of the Harvard Ave. bridge over the creek. The houses of RLA #30 are situated at between the 720-ft. and 740-ft elevation contours—well above the creek, which flows at about 670 feet at the Harvard Ave. crossing. Because RLA #30 is so far above Fred Creek, and flood damage in the RLA has been due to overland flow, the area and its flood-prone properties are not discussed in any of the City's master drainage plans—including those for Fred Creek.

The situation of RLA #30 is illustrated in the topographical map on the following page. Although the original drainage has been somewhat obscured by the construction of streets and platforms for houses, the original contours are visible. There are three swales draining north-northwest from the high ground along Marion Ave. It is the middle swale that most directly impacts RLA #30: It begins at about E. 76th and S. Knoxville, flows past the east side of the RLA and then follows S. Jamestown Ave. from 75th St. north to Fred Creek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State Highway
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III. History

Development

The five properties in RLA #30 were developed between 1942 and 1978. The first residence in the neighborhood, built in 1942, was for almost 20 years the only house in the area. The Denwood Estates Addition was developed in the 1960s and 1970s. Due to the sloping ground, most homes were slab-on-grade built upon their own leveled platform. These site changes did not, however, erase the original drainage pattern. The swale carrying runoff from the Marion Ave. heights down to Fred Creek more or less remained. It is runoff following this former drainage way, combined with site changes during development, which have apparently been the source of water damage in the RLA.

Flooding

As stated above, flood damage in RLA #30 has been the result of overland flow to the north-northwest along a former drainage swale that descends from high ground around E. 77th and S. Marion Ave., passes near the corner of 76th and Knoxville, and then follows Jamestown Ave. to join Fred Creek at about 74th and Indianapolis. Flooding problems were likely made worse by the development of Denwood Estates. The RLA is well above and distant from both FEMA's SFHA and Tulsa's Regulatory Floodplain.

Looking east (upstream) on Fred Creek from Harvard Ave. bridge.

Improvements

With the construction of Denwood Estates Subdivision in the late 1960s and 1970s, a storm drainage system was put in place in the RLA #30 neighborhood. Storm drain inlets were installed at E. 76th and S. Knoxville Ave. to intercept runoff from the E. 77th and S. Marion Ave. hill, as well as at E. 75th and S. Jamestown Ave. These measures have been effective in reducing, if not eliminating, flooding in the RLA.

IV. Research and Analysis

The analysis of Repetitive Loss Area #30 was conducted by the Project Team through interviews with City officials, research into Engineering Services and Stormwater Drainage files, including the Fred Creek Master Drainage Plan, review of the City's extensive flood history documentation, assessment of insurance claims, field trips to the RLA, interviews with home owners and questionnaires mailed to the residences soliciting information about prior and existing flooding issues, if any. The Repetitive Loss Property in RLA #30 is an upscale slab-on-grade residence that was damaged on two occasions from overland flow off the hillside to the south-southeast of the property. As the

Repetitive Loss Property was the original house in the neighborhood, flooding appears to have been the result of street construction and other site changes during development. Storm sewer construction during the development of Denwood Estates have apparently not eliminated, the flood hazard in the RLA.

Agencies and Organizations

The City of Tulsa's Storm Drainage & Hazard Mitigation Advisory Board (SDHMAB), which also serves as the City's Hazard Mitigation and CRS Committee, and the CRS Public Participation Involvement & Information Committee (PPI) met monthly during the two-year Repetitive Loss Area Planning process. Each committee was updated on the status of the planning process, discussed issues, and provided guidance. Research and analysis were done in accordance with guidelines from the Federal Emergency Management Agency (FEMA), the National Flood Insurance Program (NFIP) and the Community Rating System (CRS).

Local, State & Federal Agencies and non-profit organizations are represented on the PPI Committee. The RLA plans were discussed at the PPI Committee meetings, and other agencies such as TAEMA were contacted by phone or email. The RLA plans were presented to City Council for adoption; the agenda was made public and furnished to the media. The council meeting is a public meeting and the local media was present at the meeting. In addition the council meetings are aired on our local government network TV channel TGOV.

Participating agencies and organizations involved were: City of Tulsa (CoT) Storm Drainage & Hazard Mitigation Advisory Board, CRS PPI Committee, CoT Communications Department, CoT Development Services, Working in Neighborhoods, CoT Engineering Services, CoT Finance Department, CoT Legal Department, CoT Streets & Stormwater, CoT Water & Sewer Department, Child Care Resource Center, Indian Nations Council of Governments, Tulsa Area Emergency Management Agency (TAEMA), Disaster Resilience Network, Metropolitan Environmental Trust, Oklahoma Insurance Department, Tulsa Association of Realtors, U.S. Army Corps of Engineers.

Plans, Studies and Documents

The following City of Tulsa and FEMA documents were used in the analysis:

- *Flood Insurance Rate Map*, City of Tulsa, October 16, 2012
- *Regulatory Floodplain Map Atlas*, Tulsa Engineering Services, October, 2016
- *2014 City of Tulsa Hazard Mitigation Plan Update*, Flanagan & Assoc., 2014
- City of Tulsa *Stormwater Management Plan*
- Stormwater Design Criteria Manual: Critical Neighborhood Flood Control Projects
- Stormwater Capital Improvements List, City of Tulsa, Engineering Services
- *Fred Creek Master Drainage Plan, Interim Report*, September 1987
- *Fred Creek Master Drainage Study, Final Report*, August 1988
- *Guidebook to Conducting Repetitive Loss Area Analyses*, UNO and FEMA

Capital Improvements Plans

No City of Tulsa Capital Improvements are currently planned that could have a positive impact on the flooding problems in Repetitive Loss Area # 30. There are storm sewer improvement and regional detention facilities on the existing CIPs for Little Joe Creek along with Master Drainage Plan recommendations that are not yet on the CIPs. None are presently funded.

Flood Insurance Data

No properties in the RLA currently carry flood insurance. Because the Privacy Act of 1974 (5 USC 522a) restricts the release of flood insurance policy and claims data to the public, property-specific claims data are not detailed in this Plan.

Claims Data.

One residence in the RLA (the Repetitive Loss structure) has made two paid flood damage claims—in 1980 and 1986—for a total of $5,022. There have been no claims or reported flooding in this neighborhood since 1986.

Field Surveys and Site Visits

Site visits were conducted during the study, primarily to confirm foundation type and view local on-site overland flow drainage patterns.

Review Drainage Patterns.

The Project Team examined aerial topography maps, master drainage plans, storm sewer plans, City Customer Care Center complaints and comments, and conducted field checks to determine area drainage patterns and identify flooding problem areas. The results of the research and analysis are described in the following paragraphs and summarized in the table below.

Structures

The Project Team made a number of visits to RLA #30 to determine the situation and condition of the structures. Visual analysis was verified by queries of Tulsa County Assessor data.

Structure Type.

The structures in RLA #30 are all upscale, single-family residences.

Foundation Type.

The type of foundation was determined by field investigation and query of Tulsa County Assessor records. Four residences in RLA #30 are built on slab-on-grade foundations, and one has a conventional foundation.

Condition of Structures.

The condition of properties in the RLA was determined by field investigation and a search of the County Assessor's records. The structures were all in Good condition. These findings are summarized in the following table.

Properties in the RLA

Address	Structure Type	Foundation Type	Year Built	Condition
Property 1	Single Family Residential	Slab	1969	Good
Property 2	Single Family Residential	Slab	1969	Good
Property 3	Single Family Residential	Slab	1942	Good
Property 4	Single Family Residential	Slab	1968	Good
Property 5	Single Family Residential	Conventional	1969	Good

Notification

Annual Floodplain Notification. Each year, in March, the City notifies all homeowners and residents living in a 100-year floodplain that their properties are subject to flooding and informs them of what steps they can take to protect their residences and families, including the purchase of flood insurance.

Annual Repetitive Loss Area Notification. Residents in RLA #30 are notified annually that their homes are located in a Repetitive Loss Area, and are potentially subject to flood damage from overland flow and sewer back-up.

Property Owners/Residents Notification. Property owners and residents/occupants were advised of the Repetitive Loss Area study and analysis by letter, were sent a questionnaire soliciting information and input, and asked to contact the City for more information or a copy of the completed RLA Plan.

Public Participation and Involvement. City Staff/Consultants interviewed homeowners to brief them on the Repetitive Loss Area Analysis Study/Plan, receive their input, and discuss possible mitigation measures.

Property Owner Response to Notifications. There has been one comment from residents and property owners in response to notification. The responding property owner stated that there has been no flooding of the property since its purchase in the 1970s.

Conclusions

Repetitive Loss Area #30 is located along E. 75th St. between S. Indianapolis and S. Jamestown Aves. and contains five upscale single-family residences in the Denwood Estates Addition. The properties are one- and two-story, ranch-style, slab-on-grade structures built between 1942 and 1978, currently in Good condition. One residence in the RLA (the Repetitive Loss structure) has made two paid flood damage claims—in 1980 and 1986. All flood damage has been due to overland flow, with water from the Marion Ave. hill flowing down an old drainage swale and into the property. Storm sewer additions at 76th and S. Knoxville and 75th and Jamestown appear not have eliminated, flooding in the RLA. There have been no claims or reported flooding in the neighborhood since 1986.

V. Mitigation Measures

Overview

The Master Drainage Plan for this reach of the West Tributary identifies the most cost-effective structural solutions, while the Non-Structural Plan identifies buildings where structural measures are not cost-effective, and acquisition is the recommended solution. As noted above, all flooding events have been the result of overland flow off the Marion Ave. hill along an old drainage swale. Only one property has reported flood damage. The addition of storm sewer inlets at the base of the Marion Ave. hill at 76th and Knoxville and 75th and Jamestown have not eliminated, flooding of the Repetitive Loss Property. As the location of the RLA is so far distant and above Fred Creek itself, and the cause of flooding clearly overland flow, neither the Repetitive Loss Property nor the RLA were mentioned in the *Fred Creek Master Drainage Plan* and *Interim Report*.

Individual property protection actions are usually undertaken by property owners on a lot-by-lot, building-by-building basis, and include private floodproofing, moving mechanical equipment above flood levels, installing French drains and minor site grading to move local drainage to the street, sewer backup protection, and flood insurance. Dry floodproofing is not recommended for residential structures.

Individual Flood Protection Measures. What You Can Do

Individual property protection actions are usually undertaken by property owners on a lot-by-lot, building-by-building basis, and include private floodproofing, moving mechanical equipment above flood levels, installing French drains and minor site grading to move local drainage to the street, sanitary sewer backup protection, and flood insurance.

The City of Tulsa is willing to have a stormwater engineer do a site visit to assist you in analyzing your specific drainage problems and discuss potential solutions. Contact the Customer Care Center at (918) 596-7777, or go online to www.cityoftulsa.org/connect/contact-the-city.

Know and Understand Your Flood Risk. As stated above, being located in a Repetitive Loss Area does *not* mean a property will flood. Nevertheless, it is important that residents and property owners in flood hazard areas know and understand their flood risk and take what steps they can to protect their homes, families and possessions. City staff is available to explain the local flood risk, interpret floodplain maps, and determine if an area or property has drainage problems or a history of prior flooding. Staff can also discuss the ways a specific property can be protected from flooding. An Elevation Certificate can help define a property's flood risk under various rainfall scenarios (e.g., in a 10-year, 50-year,

This platform and wall protect the home and air conditioning equipment from shallow flooding.

100-year, or 300-year storm). You can receive a free flood zone determination by contacting the City with the correct legal description and street address, or the Tax Assessor/Parcel Number of the property.

Make a Disaster Preparedness Plan. It is always a good idea for people living in flood hazard zones to have a disaster preparedness and response plan that addresses all the steps and details that will demand attention once a flood watch or warning is issued. A Building Permit is required to install a safe room in a flood-prone area.

Create Berms, Swales or Redirected Drainage: Flood waters can be diverted away from residences using berms, brick planter boxes and swales, but these may not be done in ways that cause damage to other properties. Owners and residents can request a meeting with a City Engineer to discuss the best ways to solve existing drainage problems, and whether a Building Permit will be required. This may be the most feasible solution for areas with flooding due to overland flow, as in RLA #30.

Install Local, Property-Specific Paving, Plantings and Catchment Basins. City Engineering staff can explain the natural functions of floodplains and how they act to slow and purify urban runoff and reduce flooding. Staff can also suggest low-impact development projects which imitate natural floodplain functions by slowing runoff and filtering out impurities. These include such things as rain gardens, catchment basins and pervious paving materials.

Acquisition: The City of Tulsa has a repetitive loss acquisition program to purchase repeatedly flooded properties. This voluntary program offers owners who are in this situation a way out. The City applies to FEMA for funds using the Hazard Mitigation Grant Program. Once the grant is awarded, the property is appraised as if it is not a flood-prone property and the purchase offer is based on this appraisal. In addition to getting the best possible price, the owner receives moving expenses, a $1,000 stipend for buying a home outside the floodplain, and a 30-day rent free period after closing in which to move. All closing costs and other fees are paid by the City. Once the owner has moved out, the home is demolished and restored as open space to protect the natural and beneficial function of the floodplain. If you would like more information about this program contact the Customer Care Center at (918) 596-7777.

Acquisition is usually not feasible or cost effective for areas of shallow flooding, as in RLA #30. If a property is located in a FEMA Floodway or Special Flood Hazard Area, acquisition and relocation may be feasible and cost-effective.

Elevate Your Structure: Elevating the structure is only suitable for areas of shallow flooding, and is usually not feasible or cost-effective for masonry homes built on concrete slabs. It can sometimes be cost-effective for wood frame buildings on conventional foundations or crawlspaces. None of the homes in RLA #30 is a candidate for elevation.

Dry Floodproof Your Structure. This can include actions that seal a structure and prevent floodwaters from entering. This method is best in areas where flood depths are no more than two or three feet. Buildings can be made watertight by sealing the walls with waterproof coatings, impermeable membranes, or additional layers of masonry or concrete. Doors, windows, and other openings below the base flood elevation must also be equipped with permanent or removable shields, and backflow valves must be installed

in sewer lines and drains. Dry floodproofing needs to be designed by an engineer to ensure the structure can resist the force of the water.

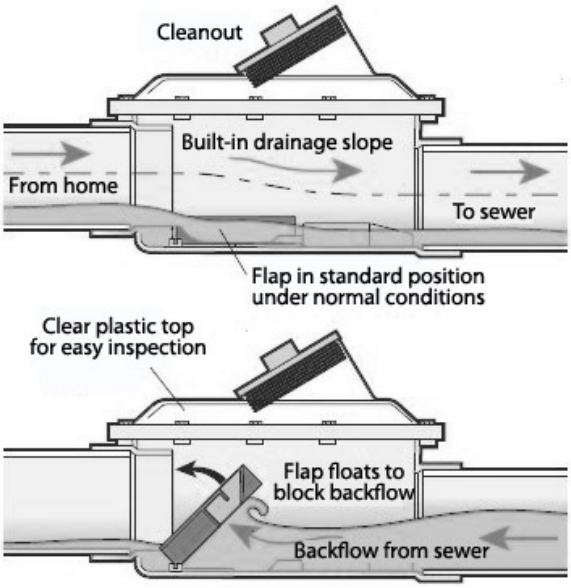
Wet Floodproof Your Building. Wet floodproofing allows water to enter a structure, while removing, protecting or elevating items that can be damaged, such as air conditioning equipment. This is often used on structures with crawl spaces and shallow flood depths. The City does not allow basements in flood-prone areas, or the wet floodproofing of basements.

Wet Floodproof Your Garage. The garage, with its slab-on-grade construction, is one of the most vulnerable areas of your home to overland flow flooding. Remove, relocate, elevate, or otherwise protect items that can be damaged from flooding.

Elevate Damage-Prone Components. Critical items such as furnace or air conditioning units, should be elevated to avoid flood damage. This should be done for components that are in the wet-floodproofed area of the building as well as for units that are outside of the structure but subject to shallow flooding.

Correct Sewer Backup Problems. Sewer backup can be a problem in low-lying, flood-prone areas like RLA #30. The installation of backflow prevention valves in sewer lines is recommended.

Maintain Nearby Streams, Ditches, and Storm Drains. Local flooding can often be caused by brush and other debris blocking drainage ways and culverts. Culvert and sewer blocking by limbs, grass cuttings and other debris in RLA #30 could contribute to future flooding. Residents and property owners should do their part in keeping inlets and drainage ways clear of brush and debris. Do not attempt to clear debris during a flood event.



Sewer backflow prevention valves are essential components for homes in low-lying, flood-prone areas.

Purchase and Maintain Flood Insurance. Flood Insurance is available and recommended for the structure and contents for all properties in Tulsa. A large percentage of all flood insurance claims are for properties that are outside the FEMA floodplain. Because of the City of Tulsa's sustained efforts to reduce flooding, you are entitled to a discount on your flood insurance. A property does not have to be in a floodplain to qualify for flood insurance.

Repetitive Loss Area Mitigation Measures: What the City Can Do

The City of Tulsa is actively committed to the following floodplain management activities:

- Preventative activities to keep flood problems from getting worse.

- Natural resource protection activities to preserve or restore natural areas or the natural functions of floodplain and watershed areas.
- Emergency services measures taken during an emergency to minimize its impact.
- Structural projects to keep flood waters away from properties.
- Public information activities to advise property owners, potential property owners, and visitors about flood hazards, ways to protect people and property from the hazards, and the natural and beneficial functions of local floodplains.

As funding becomes available for this Repetitive Loss Area, the City will undertake a more detailed Mini-Master Drainage Plan to identify alternative solutions to the flooding problems and recommend a public works project. The actual construction of any public works project may require the acquisition of properties and/or drainage easements. The City will continue to fulfill its maintenance responsibility for channels, drainageways, and storm sewer inlets and pipes. At this time, the City has identified the following actions which are appropriate for RLA #30.

- Extend and/or improve the storm sewer system to better collect storm water runoff.
- Acquire flood prone properties on a voluntary basis.

VI. Funding

Due to the nature of the flooding problems and the localized, minor damages involved in RLA #30, the funding of needed improvements will have to be borne by the individual homeowner.

VII. Conclusions and Recommendations

Repetitive Loss Area #30 is in the Fred Creek drainage, situated along E. 75th St. between S. Indianapolis and S. Jamestown Aves., about 800 feet southeast of the Harvard Ave. bridge over the creek. The neighborhood is set on a hillside, with the land rising to the south and east to the high ground around S Marion Ave. and 77th St. The RLA contains five upscale, ranch-style, one- and two-story single-family residences built between 1942 and 1978. Four of the homes are slab-on-grade, while the fifth sits on a conventional foundation. All properties are in Good condition. The Repetitive Loss Property was the original residence in the area, built in 1942, over 20 years before the development of Denwood Estates in the late 1960's and 1970s. Runoff from the high ground along Marion Ave. has traditionally flowed to the north-northwest via three shallow swales to join Fred Creek at about E. 74th and Indianapolis Ave. One of these original swales carried runoff past the east side of the RLA's Repetitive Loss Property, before following S. Jamestown Ave. to Fred Creek. Although site drainage patterns changed somewhat with the construction of Denwood Estates, the general flow of stormwater runoff has remained largely the same. Overland flow down this swale has been responsible for flood damage in the RLA. The construction of storm sewers and inlets at 76th and Knoxville and 75th and Jamestown during the development of the Denwood Estates Subdivision appears to have reduced but not eliminated flooding in the RLA. Given the slab-on-grade foundations of most of the homes in the neighborhood, properties will continue to be at some risk of flooding, especially during large rainfall events. Homeowners are encouraged to keep culverts free of debris and maintain flood insurance on both their structures and contents. Because the residences in the RLA are not within FEMA's

regulatory floodplain, the cost of flood insurance is low. In addition, since the City is a CRS Class II Community, homeowners will receive an additional 10% discount on their insurance premiums.