

Substantial Damage Management Plan



City of Lee's Summit
220 SE Green Street
Lee's Summit, MO 64063

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LIST OF ACRONYMS

CRS	Community Rating System
CSD	Cumulative Substantial Damage
CSI	Cumulative Substantial Improvement
FEMA	Federal Emergency Management Agency
GIS	Geographical Information System
ICC	Increased Cost of Compliance
NFIP	National Flood Insurance Program
RL	Repetitive Loss
SD	Substantial Damage
SDE	Substantial Damage Estimate/Estimator
SDP	Substantial Damage Management Plan
SEMA	State Emergency Management Agency
SFHA	Special Flood Hazard Area (also the 100-year Floodplain)
SI	Substantial Improvement
TCO	Temporary Certificate of Occupancy
UDO	Unified Development Ordinance

Introduction

The following plan has been implemented by the City of Lee's Summit, Missouri (the City) to assist with meeting requirements of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) regarding substantial damages (SD) and substantial improvements (SI). This plan provides the City's definitions of Substantial Damage and Substantial Improvement, assesses vulnerable areas, identifies the roles and responsibilities of the City's Substantial Damage Management Team, explains procedures for estimating and determining substantial damage, describes the process the City uses to track substantial damage and substantial improvement, outlines steps to take before and after a disaster, and details procedures for annual reporting.

The intended purpose of this plan is to increase awareness of flood risk areas and ensure that a strategy is in place for damage determinations and enforcing substantial damage requirements if a flood occurs. In addition, this plan fosters communication with residents and elected officials and helps develop long-term actions to mitigate properties and reduce future losses.

CRS and Substantial Damage

The Community Rating System (CRS) is a program developed by FEMA that provides discounts on flood insurance to residents of communities who implement measures beyond the minimum NFIP standards. Communities can receive discounts on flood insurance premiums for residents and business owners by earning credits for meeting criteria outlined in the CRS Coordinator's Manual. The number of credits earned correlates with different class levels, which, in turn, provide an increasing level of discounts, up to 45%. The City of Lee's Summit is currently a Class 9 CRS community.

In 2021, FEMA released an addendum to the CRS Coordinator's Manual that provides a new credit opportunity (Activity 512.d) for developing a Substantial Damage Management Plan (SDP). This SDP was not only created to help the City meet requirements of the NFIP program, but also to meet some of the CRS Activity 512.d credit requirements.

CRS-Required Steps to Develop a Substantial Damage Management Plan

Three levels of CRS credit are available for Activity 512.d, for a maximum of 140 points. The three levels of credit available are as follows:

- SDP 1 – base credit for development of an SDP (40 points)
- SDP 2 (optional) – Pre-population of the FEMA Substantial Damage Estimator (SDE) 3.0 software, or equivalent (50 points)
- SDP 3 (optional) – Consideration of pre-event mitigation alternatives (50 points)

The base credit for SDP 1 must be achieved in order to be eligible for SDP 2 and SDP 3 credit. Activity 512.d outlines the following seven requirements needed for SDP 1 credit:

1. **Use appropriate definitions for Substantial Damage.** The SDP must be developed using a definition of substantial damage that meets or exceeds the NFIP definition.
2. **Address Cumulative Substantial Improvements and/or lower Substantial Damage thresholds, if applicable.** If a community is receiving credit for Cumulative Substantial Improvement (CSI) under CRS Activity 430, then the SDP must reference the community's Cumulative Substantial Damage (CSD) definition credited under Activity 430 and describe the process for tracking CSI. If a community is receiving credit for having a lower threshold for Substantial Improvement, then the definition of the lower Substantial Improvement must be referenced.
3. **Use the CRS six-step planning process to generate a SDP.** The SDP must be the outcome of the CRS-defined six-step planning process. All steps, outlined in the next section are required, but steps 2-5 do not have to be completed in the order listed. When the six-step process is followed, the SDP 1 credit requirements will be met.
4. **Prepare an annual SDP evaluation report.** The annual evaluation report must review the plan's pre-event action items, describe which of those items were implemented or not, and recommend changes, as appropriate. The report should highlight any flood damage that occurred since the previous report, address any changes or improvements to the plan resulting from the event, discuss any updates to the database of properties at risk of substantial damage, and note any changes to the community's regulations that affect substantial damage or substantial improvements.
5. **Inform elected officials.** The SDP does not need formal approval or adoption by the City Council, but a copy of the SDP must be submitted to the City Council, along with each annual evaluation report and any updates to the SDP. However, if either the SDP or annual report are prepared using sensitive or confidential data obtained by FEMA, then a summary report must be prepared for the City Council in lieu of the SDP or annual report.

6. **Revise and update the SDP, as appropriate, and make current versions available.** The most current version of the SDP, including review of the six planning steps, must be provided to FEMA during the CRS cycle verification visit. If no update or revision has been made to the SDP, the annual evaluation report is required to be submitted indicating that the previous version of the SDP remains in effect.
7. **Make the SDP available to FEMA and the State Emergency Management Agency (SEMA).** A copy of the current SDP must be provided to the SEMA NFIP Coordinator and the FEMA Region 7 Office, if requested.

Six-Step Planning Process

Criteria 3 above requires the City to develop this SDP following a Six-Step Planning Process, outlined in the table below. The City has followed this process in the development of this SDP, as described in the sections following the table.

Six-Step Planning Process	Section
Substantial Damage Vulnerability Assessment	1.0
Substantial Damage Regulations and Definitions Review	1.1
Previous Substantial Damage and Improvement Determinations	1.2
List and Maps of Special Flood Hazard Area Properties	1.3
Other Considerations, including Tracking Procedures, for Sub. Damage	1.4
General Description of Buildings on the Potential Sub. Damage List	1.5
Substantial Damage Management Team	2.0
Post-Event Efforts Related to Substantial Damage	3.0
Post-Event Coordination and Communication efforts	3.1
Damage Estimate and Substantial Damage Determination Procedures	3.2
Compliance Procedures for Substantial Damaged Structures	3.3
Database for Substantial Damage Estimates	4.0
Basic Substantial Damage Property Database	4.1
Optional SDP 2 Credit Opportunity: Pre-Populating FEMA SDE 3.0 Software	4.2
Pre-Event Actions to Address Potential Substantial Damage	5.0
Education and Outreach	5.1
Optional SDP 3 Credit Opportunity: Consideration of Mitigation	5.2
Plan Implementation and Update Procedures	6.0
Annual Evaluation and Report Schedule	6.1
Communication with Elected Officials	6.2
SDP Update Procedure and Schedule	6.3
Privacy Act Requirements	6.4

1.0 Substantial Damage Vulnerability Assessment

Developing this SDP requires the City to identify vulnerable areas of the community so that 1) substantially damaged properties can be safely identified and evaluated and 2) homeowners and business owners can reoccupy their structures. Identifying areas that are more vulnerable can help focus efforts to those areas that may need the most attention after a disaster. Step 1 of the Six-Step Planning Process has five components, as identified below.

1.1 Substantial Damage Regulations and Definitions Review

The first component of Step 1 requires the City to review the current floodplain ordinance and regulatory authority to ensure that the substantial damage regulations meet or exceed NFIP requirements, including definitions of substantial damage, substantial improvement, cumulative substantial improvement, and thresholds below NFIP standards for substantial damage or substantial improvement, if applicable.

The City has adopted the State of Missouri Model Floodplain Ordinance. The City's Floodplain Ordinance, identified as the City's Floodplain Overlay District, can be found on the City's website within Article 5, Division II of the City's Unified Development Ordinance (UDO):

https://library.municode.com/mo/lee's_summit/codes/unified_development_ordinance?nodeId=ART5OVDI_DIVIIFLOVDI

Section 5.130 of the City's UDO includes definitions for Substantial Damage and Substantial Improvement (which includes Cumulative Substantial Improvement). Section 5.150 designates the City Engineer as the City's Floodplain Administrator and explains the related duties and responsibilities. Section 5.150 also identifies the application process for a floodplain development permit. Section 5.170 defines Cumulative Improvement and identifies standards for floodway and floodway fringe development; Section 5.200 defines the floodproofing certification process; and Section 5.210 explains floodplain management variance procedures. Section 5.250 explains penalties for violation of the ordinance.

REPETITIVE LOSS (RL) – means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event equals or exceeds 25 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL DAMAGE – means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. The term includes repetitive loss buildings.

The term does not apply to:

- 1) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions.
- 2) Any alteration of a “historic structure” provided that the alteration will not preclude the structure’s continued designation as a “historic structure,” or
- 3) Any improvement to a building.

SUBSTANTIAL IMPROVEMENT – means any combination of reconstruction, alteration, or improvement to a building, taking place during a ten-year period, in which the cumulative percentage of improvement equals or exceeds 50 percent of the current market value of the building. For the purposes of this definition, an improvement occurs when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures, which have incurred “repetitive loss” or “substantial damage”, regardless of the actual repair work done.

The term does not apply to:

- 1) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions.
- 2) Any alteration of a “historic Structure” provided that the alteration will not preclude the structure’s continued designation as a “historic structure,” or
- 3) Any building that has been damaged from any source or is categorized as repetitive loss.

1.2 Previous Substantial Damage and Substantial Improvement Determinations

The second component of Step 1 requires the City to provide 1) a description of the primary flood risk and flood damage history related to that risk and 2) prior damage assessment records from the FEMA SDE 3.0 software.

According to the *Flood Insurance Study for Jackson County, Missouri and Incorporated Areas and Kansas City* dated January 20, 2017, in the Kansas City region, all runoff eventually drains

into the Missouri River. Major floods occurred on the Missouri River in 1844, 1903, 1951, and 1993.

The City of Lee's Summit is located within the Lower Missouri-Crooked and South Grand watersheds, both of which ultimately flow to the Missouri River. Flash flooding along local streams is the primary flood risk in the City. While flooding is not a common occurrence in the City, damage from flooding primarily occurs within or near the Special Flood Hazard Area (SFHA), also known as the 100-year floodplain or the 1% annual chance flood area. The primary tributaries that experience flooding within the City include:

- Little Blue River
- Maybrook
- East Fork of the Little Blue River
- Cedar Creek
- Tributary C2 to Cedar Creek
- Tributary G1 to Lake Winnebago
- Tributary P3 to Prairie Lee Lake
- Tributary P5 to Prairie Lee Lake

Copies of the City's substantial damage records from the FEMA SDE 3.0 software can be found in **Appendix A**. In order to ensure accuracy and compliance within the allotted time frame, the City reviews and/or updates this substantial damage list annually, coinciding with annual review of this SDP.

1.3 List and Maps of SFHA Properties Having Potential for Substantial Damage

The third component of Step 1 requires the City to maintain 1) an inventory of structures that are susceptible to substantial damage and 2) maps that identify these structures.

Appendix B contains the City's list of structures within the SFHA. Repetitive Loss structures and structures that have undergone previous Substantial Damage estimates are included in the list, but Repetitive Loss structures are not specifically identified to ensure privacy is maintained for these properties. Additionally, ownership information has been removed from the list attached to this plan for privacy purposes.

The City utilizes digital geographic information system (GIS) map overlays to identify the location of the SFHA across the City. After a disaster, City staff utilize these maps in the field for making substantial damage estimations. If digital access cannot be achieved during substantial

damage estimations, paper copies of the maps are provided to staff. Exported copies of the maps showing the SFHA overlays are included in **Appendix C**.

1.4 Other Considerations, including Tracking Procedures, for Substantial Damage and/or Substantial Improvements

The fourth component of Step 1 requires the City to provide 1) procedures for tracking cumulative substantial damage and/or improvements and 2) a description of any additional considerations the City utilizes to track substantial damage and/or improvements.

The City tracks cumulative substantial damage using the FEMA SDE 3.0 software. When a substantial damage estimation is completed, the estimated damage cost, market value, and other pertinent information is recorded in the software. As future damages are added, the damages to a structure are tracked cumulatively to determine if the total damages exceed 50% of the market value over a 10-year period.

The City tracks cumulative substantial improvements, building permits, and floodplain development permits electronically using internal software. When a floodplain development permit is received for improvements to an existing structure within the floodplain, the City electronically records the estimated cost of the improvement. Using these records, City staff determine if a cumulative substantial improvement has been triggered. The City considers the sum of improvements to a structure over a 10-year period when calculating cumulative substantial improvement.

One additional consideration related to tracking substantial damage and substantial improvement involves Repetitive Loss (RL) properties. Using the FEMA-provided list of RL properties, the City maintains a separate spreadsheet and set of maps to track substantial damage and/or requested substantial improvements to RL properties within City limits to ensure privacy is maintained for these properties.

1.5 General Description of Buildings on the Potential Substantial Damage List

The fifth component of Step 1 requires the City to provide a general description of the structures on the City's potential substantial damage list.

The types of structures within the City include single-family dwellings, multi-family structures, commercial buildings, and industrial facilities. Approximately 34% of the City is zoned as residential, 5% is zoned as commercial, 5% is zoned as industrial, 34% is zoned as agricultural,

and 6% is zoned as mixed use. Approximately 95% of the structures within the City's SFHA are residential with the remaining zoned as commercial.

Copies of the City's substantial damage records from the FEMA SDE 3.0 software can be found in **Appendix A**. **Appendix B** contains the City's list of structures within the SFHA, which includes relevant building data needed to complete a damage assessment, such as address, square footage, and building connection attributes. Ownership information is included in the list but has been removed from the copy attached to this plan to ensure privacy is maintained. The City utilizes the FEMA SDE 3.0 software to track substantially damaged structures and uses a spreadsheet and GIS to track not only the structures within the SFHA but also those outside the SFHA having potential risk.

2.0 Substantial Damage Management Team

Developing this SDP requires the City to identify the staff and resources responsible for enforcement of the floodplain regulations, permitting, field inspections and assessments, communications, and tracking. After a disaster, several City departments and staff are involved in the recovery process. Identifying these resources in advance and ensuring they are trained in their roles and responsibilities prior to an event is necessary for a swift and accurate rebuilding process.

Responsible Departments - The Development Services Department is responsible for issuing building permits, building inspections, and tracking cumulative substantial improvements. The Public Works Department is responsible for overall floodplain management, ensuring that floodplain ordinances are enforced, and tracking cumulative substantial damage. The Creative Services Division of the Administration Department is responsible for timely communications to elected officials, business owners, residents, and the public.

Sufficient Staff – The Substantial Damage Management staff utilize the following FEMA-generated equation to determine the amount of time and number of staff necessary to evaluate all affected structures in the SFHA. Using this equation helps the Substantial Damage Management staff determine if additional assistance is necessary to complete all of the substantial damage field inspections in a timely manner.

# Affected Structures in SFHA	X	15 – 30 Minutes per SD Inspection	/	# of SD Inspection Teams	=	Total Time Needed for All SD Inspections
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Responsible Staff – The following is a list of City staff that are responsible for the floodplain management process, including permitting and enforcement of the City's floodplain regulations, along with their roles and responsibilities.

Floodplain Administrator/City Engineer

- Overall management of the SDP
- Request additional help through mutual aid agreements
- Identify available resources
- Communicate with elected officials
- Notify department heads, including the City Attorney, of upcoming field work
- Hire, train, supervise, certify, and license staff for field operations
- Review/approve construction certificates
- Makes final decisions regarding substantial damage determinations

Environmental Specialist/CRS Coordinator

- Ensure the SDP is executed correctly
- Ensure permits are not issued for repairs on affected structures until damage determinations are complete
- Review and process floodplain development permit applications
- Mail annual letters to RL properties and residents within and close to the SFHA
- Provide training and outreach to staff and contractors
- Coordinate substantial damage field screenings, inspections, and determinations
- Track cumulative damage trends and obtain market value data
- Prepare substantial damage documents
- Write post-event substantial damage letters to residents impacted by flooding
- Contact Creative Services regarding press releases
- Provide information on flood hazards, floodplain map data, advisory flood data, and compliance to residents and property owners
- Monitor impacted areas for unpermitted construction activities
- Coordinate final storage of SI/SD files
- Process and track requests for floodplain development variances

Certified Floodplain Managers

- Review construction certificates for accuracy

Permit Services staff

- Review and process permit applications
- Notify residents of permitting procedures for rebuilding in a floodplain
- Ensure permits are not issued for repairs on affected structures until damage determinations are complete
- Ensure follow up coordination with structure owner is completed
- Track cumulative substantial improvement
- Collect applicable permit fees
- Process, maintain, and track Temporary Certificates of Occupancy (TCO) within the floodplain
- If temporary occupancy within the floodplain is allowed, implement a procedure for tracking properties with these certificates to be mitigated as soon as possible, keeping in mind the 6-year limit of the Increased Cost of Compliance (ICC) eligibility period Plan Services Group
- Determine if damaged structures have been designated as historic or may be eligible for such designation
- Collect applicable fees

Inspectors

- Inspect temporary occupancy structures
- Conduct substantial damage inspections and determinations
- Conduct and process condemnation determinations
- Regularly document and require repairs of existing violations that have been previously identified by Codes officials as the minimum necessary to ensure safe living conditions.
- Monitor impacted areas for unpermitted construction activities

Creative Services Staff

- Prepare press releases and communications to elected officials and the public

Outside Resources – The following outside resources may be contacted in the event that the Substantial Damage Management staff determine that City staff are unable to complete post-disaster activities in a timely manner:

SEMA/State NFIP Coordinator's Office

Karen McHugh or Linda Olsen
(573) 526-9129 or (573) 526-9115

FEMA Region VII Office

Todd Tucker, Ally Bishop, or Christopher Parsons
(816) 283-7528 or (913) 837-5220 or (816) 283-7980

Mid America Regional Council

Tom Jacobs
(816) 474-4240

As a requirement of NFIP participation, the City has developed a set of Floodplain Management Administrative Procedures that incorporate administrative actions related to substantial damage and are included in **Appendix D** of this SDP.

3.0 Post-Event Efforts Related to Substantial Damage

Developing this SDP requires the City to identify and describe three essential post-event components for substantial damage management: coordination and communication procedures, field inspection and assessment procedures, and substantial damage compliance procedures. Identifying these procedures in advance provides the City with specific actions needed to complete field work as well as requirements for the administrative process related to substantial damage. A Checklist for Post-Disaster Planning is included in **Appendix E**, along with a checklist for field preparations.

3.1 Post-Event Coordination and Communication

Staff Training – The staff positions responsible for ensuring the SDP is followed and enforced are identified in Section 2.0 of this SDP. All staff involved are trained not only in the SDP

process but also on the roles and responsibilities of each team member prior to, during, and after a flood. The training is provided at least every other year and utilizes training materials generated internally from information available through SEMA and FEMA. New team members are trained annually.

Immediately after a disaster, a meeting is scheduled with appropriate staff as soon as possible to review roles and responsibilities and ensure that all staff are not only trained but also have all the tools needed to carry out their assignments. The City's Floodplain Administrator is the designated Substantial Damage Manager during and after an event and is responsible for any additional resources needed.

Communication with Elected Officials – The Floodplain Administrator is responsible for communicating with elected officials. All communications with elected officials regarding flood events and related impacts to residents and businesses is required to be reviewed by the Floodplain Administrator. It is of the utmost importance that the City prepare and present timely and accurate information to elected officials regarding the disaster at hand so the elected officials can properly respond to concerns raised from the community. The information presented to elected officials must include a description of the:

- NFIP and intent of the program to build back safer, stronger, and more resilient
- Substantial damage inspection process
- Cleanup and repair expectations
- Rebuilding expectations and requirements
- Building improvement expectations and requirements

In addition, the Floodplain Administrator provides an annual update of the City's NFIP status to elected officials, regardless of whether a disaster occurred within the calendar year or not.

Communication with the Public and Property Owners – The Floodplain Administrator is responsible for communicating with the residents and businesses impacted by a flood. After a disaster, the City sends a notice letter to property owners located within the SFHA informing them of impending damage inspections and permitting requirements. A template of this inspection notice letter is also included in **Appendix F**.

An appropriate and informative press release is also prepared. Items included in the press release and communications to the public may include, but are not limited to:

- Permit requirements
- Substantial damage requirements, including information of elevation and freeboard ordinance requirements

- Safety hazards
- Update on status of public utilities
- Locations for resources, food, and shelter
- State and Federal Assistance
- Procedures for filing flood insurance claims
- NFIP Increased Cost of Compliance procedure
- Contact information for additional questions

Appendix F includes a template Press Release that the City uses for post-disaster communication, which can be altered to fit a specific disaster or event. If there is an instance where the City is aware of an impending disaster, particularly if the disaster is weather related, relevant information is provided to residents and businesses in advance of the event, typically via social media, when possible.

3.2 Damage Estimate and Substantial Damage Determination Procedures

The CRS-required process for completing substantial damage determinations includes four key administrative actions: 1) determining the cost of the damage, 2) determining the structure's market value, 3) comparing the cost of damage and market value to the substantial damage threshold adopted in the City's ordinance, and 4) requiring owners to obtain permits and bring substantially damaged structures into compliance.

Initial Damage Assessment Screenings – Initial damage screenings, led by the Substantial Damage Management staff, begin as soon as it is safe to enter the area, typically within 1-3 days after the event ends. Initial damage screenings include a visit to all affected areas of the SFHA to identify every affected structure and note those with obvious structural damage. Initial screenings are performed by walking along the impacted areas and viewing structures from the street. At that time, damage is estimated based on the high-water mark (in the case of a flood) or on other characteristics such as roof damage after a high-wind event. Additionally, photos are taken of affected structures. A printed map from the City's GIS system is used to identify locations of damaged structures, high-water marks are recorded, and photo logs are created. During initial screenings, the map is marked using the following designations:

Initial Damage Screening Map Designations	
Designation	Description
Green	<ul style="list-style-type: none"> • Structures with low water levels and/or damages • Not likely to be substantially damaged • Approximately 0 – 40% damaged

Yellow	<ul style="list-style-type: none"> • Substantial damage cannot be clearly determined • May need more evaluation to determine damage level • Approximately 40 – 60% damaged
Red	<ul style="list-style-type: none"> • Structures that experienced high water levels and/or damages • Clearly substantially damaged • Approximately 60-100% damaged
General Considerations	<ul style="list-style-type: none"> • If a structure has been moved off of its foundation or if there is major foundation damage, it is nearly certain that the structure has been substantially damaged • If flood depths exceed 2 feet above the first (primary) floor on a traditionally constructed frame structure, the structure may be approaching substantial damage thresholds. • If flood depths exceed 1 foot on a mobile or manufactured home, the structure may be approaching substantial damage thresholds.

During the initial screenings, notices are posted on structures notifying the owners that damage has occurred and that there is a need for inspection before the structure is occupied again or repair work begins. The general notice that the City uses is included in **Appendix F**. Additionally, if the disaster is flood related, door hangers are placed on affected structures notifying property owners of substantial damage requirements and the flood recovery process. The door hanger that the City uses is also included in **Appendix F**.

Information collected during the initial damage screenings not only identifies the addresses and/or locations of all affected structures but also is used to 1) define the scope of upcoming field inspections for substantial damage and 2) calculate the number of days and staffing needed to complete the inspections. It is important to note that even structures that are clearly damaged still must have a substantial damage determination completed.

Using the information gathered during the initial damage screenings, the FEMA-generated equation included in Section 2.0 of this SDP is used by the Substantial Damage Management staff to determine the amount of time and staff necessary to evaluate all affected structures in the SFHA.

In compliance with FEMA regulations, no permits are issued by the City for structure repair on affected structures until a damage determination is completed.

Substantial Damage Determinations – When creating teams to conduct substantial damage field inspections and assigning work areas, more experienced staff are assigned to areas that were marked in yellow during the initial damage screening. All inspection teams walk the SFHA and perform field inspections of affected structures in their assigned areas. **Appendix F**

includes a copy of a FEMA-created worksheet that the City uses during substantial damage field inspections, along with guidance on estimating damages and percentages. It is important to remember that damage estimates need to include all costs required to return structures to their pre-damaged condition, regardless of an owner's intention to fully restore a structure to its pre-damage condition. A list of items that should and should not be considering during the substantial damage estimate is also included in **Appendix F**.

If a structure is determined to be unsafe, the structure will be posted with a noticed attached directly to the structure. An example of this notice can be found in **Appendix F**. Homeowners and occupants are also notified of occupancy requirements by letter, even if they are in the area at the time of the field inspection.

After field inspections, City staff contacts the Jackson County Assessor's Office to request the market value of affected structures separate from the associated property. That information is documented and included in the substantial damage determination.

Once field inspections are complete and market values are determined, the City utilizes the FEMA SDE 3.0 software to estimate repair costs. Since the City tracks substantial damage and improvements cumulatively, the estimated repair costs are added to any previous cost of damage or improvement that the structure has incurred over the previous 10-year period. If the repair costs from the individual event or from cumulative tracking are determined to be greater than or equal to 50% of the market value of the structure, then the structure is considered to be substantially damaged.

$\frac{\text{Cost of Repair/Improvement to Pre-Damage Condition}}{\text{Structure Market Value}} \geq 50\% \text{ of Market Value}$

3.3 Compliance Procedures for Substantially Damaged Structures

Notifying Property Owners – Once all of the substantial damage determinations have been made, a list of impacted structures is provided to all pertinent staff, including permitting and inspection staff, and a letter is sent to each impacted property owner to inform them of the results. The City has two versions of the letter, depending on the results: one for damage less than 50% of the market value and one for damage greater than 50% of the market value. If a structure has been determined to be substantially damaged (greater than 50% of the market value), City staff also post the letter directly on the structure. A substantial damage

determination triggers the requirement that property owners bring structures into compliance with NFIP regulations for new buildings and the City's ordinance in effect at the time of the flood event, which may mean elevating or relocating the structure. Examples of these substantial damage letters are included in **Appendix F**.

For property owners with substantial damage, the City recommends the property owners contact their insurance provider for information regarding NFIP insurance resources, including ICC coverage.

Owner and Contractor Affidavit – For structures within the SFHA that are determined to not be substantially damaged, City staff review permit applications to ensure that substantial improvement or cumulative substantial improvement is not triggered. If either such improvement condition is triggered, the property owner is required to bring the structure into compliance with NFIP regulations. Examples of owner and contractor affidavits are included in **Appendix F**.

Intent to Raze or Demolish – After a structure has been determined to be substantially damaged, it is the City's responsibility to ensure that the structure is mitigated as soon as possible and to remain mindful of the 6-year eligibility limit on ICC funds. One way the City ensures compliance and confirms property owner awareness of these requirements is to have the property owner sign an Intent to Raze or Demolish form, a copy of which can be found in **Appendix F**.

Floodplain-related Temporary Certificate of Occupancy – After substantial damage determinations have been completed and residents have been notified, the City determines if the structure is safe to occupy. The City may issue a floodplain-related TCO for the time needed to bring the structure into compliance. (Any permits for minimal repairs (i.e., electrical, mechanical, plumbing, structural) granted for temporary occupancy are included in the calculation for substantial damage determination.) In such cases, only minimal repairs are allowed to be made so the residence is safe to occupy and no other improvements are allowed until the structure meets the City's substantial damage requirements. The floodplain-related TCO process documents the purpose and need for temporary occupancy of the damaged structure along with appropriate time restrictions to ensure damaged homes are brought into compliance with local codes and ordinances. Temporary occupancy is re-evaluated once the established time frame has passed.

Variances – Some property owners may not be satisfied with the City's substantial damage determination. In such cases, a property owner can apply for a variance to the substantial damage determination on the basis of insufficient information, errors, repair/improvement costs that should be included or excluded, inappropriate valuations of costs for the proposed

work, or an inappropriate method to determine the market value of the building. Specific requirements for requesting a variance are outlined in the Floodplain Management Administrative Procedures included in **Appendix D** and the City's floodplain management variance procedures are defined in Section 5.210 of the City's Unified Development Ordinance. The City includes a link to FEMA Publication 213 "Answers to Questions about Substantially Damaged Buildings" on the Public Works Department webpage as a helpful resource for impacted property owners.

Compliance Enforcement – The Floodplain Overlay District of the City's UDO defines penalties for floodplain development violations. In addition, according to the NFIP, the City must utilize a stair-step approach that notifies the offender of the violation(s), providing a timeframe within which to remedy the situation prior to issuing fines, injunctions, etc.

- *Administrative Methods:* If a violation is found during inspection of an active construction site, the City's inspector verbally notifies the developer of the violation and utilizes the City's permit tracking system to fail the inspection. The failed inspection provides a timeframe within which the violation is to be corrected. The inspector then follows up with subsequent inspections to ensure compliance. Such inspections and verbal notifications are recorded in the City's permit tracking system as permanent project documentation.

If the violation is serious or if the problem continues after the initial violation notification, the City has the authority to deny inspections, issue Stop Work Orders, and/or revoke the Floodplain Development Permit. Usually, during inspections a Stop Work Order is issued before the Floodplain Development Permit is revoked. Stop Work Orders are issued by a City inspector via the City's permit tracking system. The inspector notifies the developer of the Stop Work Order verbally, via email with an electronic copy of the Stop Work Order, and with a paper copy of the Stop Work Order posted on-site. All construction in the SFHA is required to stop at the site until the violation(s) are corrected.

If the situation is severe enough and/or the developer refuses to comply with a Stop Work Order, the Floodplain Administrator has the authority to revoke the Floodplain Development Permit. This is done in writing, citing the issues and steps that have been taken to date to correct the violation.

- *Fines and Injunctions:* The Floodplain Overlay District of the City's UDO provides mechanisms for court proceedings, financial penalties, and potential civil injunctions if the situation cannot be remedied in any other manner.

Notifying the City Attorney – During the event, the City's Floodplain Administrator is responsible for contacting the City Attorney's Office to inform them that field inspectors are entering private property, that substantial damage determinations are in process, and that variances may be requested by property owners.

Notifying FEMA and SEMA – Within 90 days following an event, the City's Environmental Specialist submits electronic copies of any substantial damage documents to both FEMA Region 7 and SEMA.

4.0 Database for Substantial Damage Estimates

Developing this SDP requires the City to generate a database of the information needed to complete a substantial damage assessment of each structure identified in Step 1 of this SDP that is susceptible to substantial damage. The substantial damage property database must include building ownership, property ID number, building address, building type, number of stories, foundation type, and square footage of the structure. This database; however, cannot include RL data.

4.1 Basic Substantial Damage Property Database

The City uses the FEMA SDE 3.0 software database for tracking properties with historic substantial damage assessment records. The City uses GIS and an Excel spreadsheet to maintain a list of all properties located within the SFHA. Copies of the SDE 3.0 records are included in **Appendix A** and a list of the properties within the SFHA is included in **Appendix B**.

4.2 Pre-Populating FEMA SDE 3.0 Software

In order to achieve optional SDP 2 credit, the City is required to upload all of the properties within the SFHA into the FEMA SDE 3.0 software. Below is a screenshot of the "View Search Records" page of the SDE 3.0 software showing the number of structures that City staff has pre-loaded into the software.

Using the spreadsheet included in Appendix B, the City pre-loaded structures within the SFHA into the SDE 3.0 software. A few properties have missing data that is explained below:

- Two properties on Anderson Drive do not have an assigned subdivision or lot numbers; they were platted before subdivisions and lot numbers were a standard practice at the City. Neither subdivisions nor lot numbers will be added to these properties in the future as parcel numbers and legal descriptions exist for the properties that define their locations.
- Two properties on Maybrook Road do not have an assigned subdivision or lot numbers; they were platted before subdivisions and lot numbers were a standard practice at the City. Neither subdivisions nor lot numbers will be added to these properties in the future as parcel numbers and legal descriptions exist for the properties that define their locations.
- None of the properties have lowest floor elevation because the City has historically not required that information. As properties go through the SDE process and this information becomes available, this information will be added to the City's records.

5.0 Pre-Event Actions to Address Potential Substantial Damage

Developing this SDP requires the City to take at least one action to educate the community about substantial damage and/or substantial improvement requirements.

5.1 Education and Outreach

On an annual basis, the City sends letters to property owners who live within and in close proximity to the SFHA and to property owners with structures incurring repetitive loss. These letters not only include the required topics for CRS Activities 502-504 (Repetitive Loss) but also include information regarding substantial damage and/or improvements and NFIP requirements. Templates of the annual letters sent to repetitive loss property owners and residents close to and within the SFHA are included in **Appendix F**.

Additionally, as discussed in Section 3.1 above, the Floodplain Administrator provides an annual update of the City's NFIP status to elected officials, regardless of whether a disaster occurred within the calendar year or not.

5.2 Consideration of Mitigation

In order to achieve optional SDP 3 credit, the City is required to consider mitigation alternatives for each of the substantial damage properties, neighborhoods, or areas identified in Step 1 of this SDP. At this time, the City has not completed this process.

6.0 Plan Implementation and Update Procedures

Developing this SDP requires the City to determine how the SDP will be implemented and updated, to include procedures for annual evaluation and reporting, procedures for communicating the SDP to the City Council, procedures for updating the SDP, and procedures for adherence to the Privacy Act.

6.1 Annual Evaluation and Report Schedule

On an annual basis, the Floodplain Administrator, along with the Environmental Specialist, is responsible for evaluating the SDP and preparing an annual evaluation report. The annual evaluation process includes a review of the six planning steps, including:

- A review of pre-event action items
- A description of what has or has not been implemented
- Changes to action items
- An explanation of any flood damage that occurred during the reporting period
- An update of any ordinance language that affects substantial damage or substantial improvement (i.e., local design flood elevation, implementation of or update to cumulative substantial damage or improvements, changes to variance language, etc.)

The annual report documents the evaluation process by identifying which portions of the SPD remain valid and effective, explaining whether pre-event action items need to be updated, providing a description of what was implemented (or not) during the reporting period, and recommending changes, if necessary. Any flood damage that occurs during the reporting period are also be documented in the annual evaluation report.

6.2 Communication with Elected Officials

On an annual basis, the annual evaluation report and updated SDP, if an update is necessary, is presented to and shared with the City Council during one of the City Council committee meetings and subsequently posted on the City's website, unless there are Privacy Act concerns, as discussed in Section 6.4 of this SDP.

6.3 Substantial Damage Plan Update Procedure and Schedule

During the annual evaluation of the SDP, the Floodplain Administrator, along with the Environmental Specialist, determines if an update to the SDP is needed. The SDP is updated at least once every 5 years unless the Floodplain Administrator determines the SDP needs to be updated more frequently. Any flood damage or substantial damage that occurs requires an update to the SDP.

6.4 Privacy Act Requirements

If there is any personally identifiable information in the SDP, the supporting data to the SDP, or any annual evaluation report, a summary report is prepared as aggregate data that adheres to the Privacy Act. The summary report is then shared with the City Council during one of the City Council committee meetings and posted on the City's website.

Appendix A Substantial Damage Estimator Records

The City utilizes the FEMA SDE 3.0 software to track substantial damage, as summarized in this Appendix.

INTENTIONALLY NOT INCLUDED TO PROTECT PRIVACY

Appendix B Potential Substantial Damage Structures List

The City tracks all of the occupied structures within the SFHA, as summarized in this Appendix. Any structure within the SFHA has the potential for substantial damage.

INTENTIONALLY NOT INCLUDED TO PROTECT PRIVACY

Appendix C Potential Substantial Damage Structures Maps

The City utilized GIS to map all structures within the SFHA, copies of which are included in this Appendix.

INTENTIONALLY NOT INCLUDED TO PROTECT PRIVACY

Appendix D Floodplain Management Administrative Procedures

The City's Floodplain Management Administrative Procedures are included in this Appendix.

Administrative Procedures for Floodplain Management Regulations



City of Lee's Summit
220 SE Green Street
Lee's Summit, MO 64063

March 2020
Revised: June 2023



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Overview

The National Flood Insurance Program (NFIP), which is administered by the Federal Emergency Management Agency (FEMA), aims to reduce the impact of flooding on private and public structures. Through the NFIP, FEMA provides flood insurance to property owners, renters, and businesses in communities that participate in the NFIP.

The City of Lee's Summit has participated in the NFIP since April 3, 1978, which has allowed residents the opportunity to purchase flood insurance and apply for federal grant assistance. If the City fails to comply with NFIP requirements, these opportunities for flood insurance and federal grant assistance will no longer be available.

Participation in the NFIP requires the City to develop and enforce a floodplain management ordinance that meets or exceeds the minimum NFIP criteria, which includes adoption of any FEMA Flood Insurance Rate Maps (FIRMs) for the City. The City is also required to establish these administrative procedures, which are designed to:

- outline the City's Floodplain Management Ordinance;
- identify the role and duties of the City's Floodplain Administrator;
- include the requirements for floodplain development permits;
- explain the necessity and frequency of inspections;
- define enforcement actions;
- provide a process for appeals, special uses, and variances;
- discuss the procedures for handling complaints;
- describe the course of action for FIRM appeals and revisions;
- specify Substantial Damage Estimation requirements;
- stipulate the records retention policy and practices for administrative forms review; and
- clarify management of Approximate A Zones.

More specifically, the purpose of this document is to provide specific practices and processes for the administration of the City's floodplain ordinance that clearly outlines the requirements and regulations that will be applied to any development within the floodplain.

City Ordinances that Regulate Floodplain Development

The NFIP requires the City to develop and adopt a floodplain management ordinance. This has been accomplished through Article 5, Division II (Floodplain Overlay District) of the City's

Unified Development Ordinance (UDO). This ordinance regulates all development under provisions of the NFIP, which includes:

- defining development as any man-made change to improved or unimproved real estate, including, but not limited, to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment of materials.
- placement of structures, methods of construction, types of structures, alterations to structures (including manufactured homes);
- additions, repairs, or renovations to existing structures which are classified as substantial improvements;
- subdivisions (no structures in the floodway);
- installation of water and sewer utilities;
- filling, grading, channelizing, and excavating within the floodplain;
- installation and replacement of roads and/or bridges and storage of materials and equipment; and
- any related activities that may affect the level of the 1% annual chance flood (a.k.a., 100-year floodplain).

In addition to the Floodplain Overlay District section of the City's UDO, the City regularly adopts International Building Codes into the City's Code of Ordinances that dovetail with NFIP regulations. All of these ordinances are available on the City's website at www.cityofls.net.

The Floodplain Overlay District section of City's UDO is required by the Code of Federal Regulations 44 CFR Parts 59, 60, 65, and 70, which can be found on FEMA's website at www.fema.gov/pdf/floodplain/nfip_sg_appendix_e.pdf

Floodplain Administrator's Responsibilities

The Lee's Summit City Engineer in the Public Works Department serves as the City's Floodplain Administrator. The duties of the Floodplain Administrator are identified in the Floodplain Overlay District section of the City's UDO, and include, but are not limited, to:

- understanding the regulations governing the City's Special Flood Hazard Areas (SFHAs), which includes designated floodplains, floodways, and floodway fringe;
- reviewing all Floodplain Development Permit applications to ensure that:
 - o sites are reasonably safe from flooding;
 - o that the Floodplain Development Permit requirements have been satisfied; and

- o that all necessary permits have been obtained from federal, state, or local governmental agencies;
- reviewing all subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding;
- issuing Floodplain Development Permits for all approved applications;
- collecting fees, if required by Ordinance;
- ensuring that all required Floodplain Development Permit inspections are completed;
- notifying adjacent communities and the State Emergency Management Agency (SEMA) prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA;
- assuring that the flood carrying capacity is not diminished and shall be maintained within the altered or relocated portion of any watercourse;
- requiring floodproofing certification from a registered professional engineer or architect when floodproofing techniques are utilized for non-residential structures;
- ensuring that all final Construction and/or Elevation Certificates are complete and accurate;
- completing Substantial Damage Estimations (SDEs) following flood or other natural disaster events that affect properties in the SFHA;
- taking enforcement actions when necessary;
- interacting in any variance or appeal process;
- investigating reports or complaints of violations;
- verifying and maintaining records;
- maintaining and updating administrative documents;
- maintaining FIRM maps and flood data;
- coordinating map appeals and revisions; and
- disseminating floodplain management information to the public.

Floodplain Development Permitting Process

According to the NFIP, the regulation of all development in SFHAs is essential because structures, fill, and other such objects can obstruct floodwaters and increase flood damage. All plans submitted for development (including patios, walls, fences, backyard sheds, pools, detached garages, earthwork, etc.) must be reviewed for proximity to the SFHA. If any proposed construction is to be completed within the SFHA, a floodplain permit is required to first be obtained.

A flow chart of the City's permitting process is located at the end of this section and a copy of the "Floodplain Permit Processing in CityView" document is included in Appendix A.

Application Form and Business License: The City's Floodplain Development Permit application is the official FEMA form that has been reformatted to include the City logo. The applicant is required to submit their Floodplain Development Permit application to the Public Works office for processing. A business license is required for any company performing professional work within City Limits; therefore, staff verifies whether or not the applicant has a business license with the City before proceeding with application processing. Once a business license is on file with the City, staff enters the permit application into the City's permit tracking system, currently known as [CityView](#), which automatically assigns a unique number to the application. The original paper copy of the permit application is given to floodplain management staff for filing in a designated cabinet and electronic notification is sent to floodplain management staff that an application has been submitted and is ready for review.

Application and Permit Fees: The City collect fees in accordance with the City's Schedule of Fees.

Application Review: Before reviewing the technical information on the application, the NFIP requires staff to review the application for completeness, making sure that all fields are filled out; all plans, studies, and other required permits are attached; and that the application has been signed and dated. Such documentation includes:

- **Floodplain Development Permit application:** All fields on the Floodplain Development Permit are filled out, including date and signature
- **Site plans, grading and excavation/fill plans, and building design plans:** All information should be accurate and stamped by a registered professional engineer and/or land surveyor. Information on such plans should include, at a minimum: property lines, easements and right-of-way lines, topographic information (elevations and contours), streets, utilities, bodies of water, existing and proposed structures, elevations of all newly constructed buildings, lowest floor elevations for any existing substantially improved or substantially damaged structures, locations of clearing, filling, excavating, or other ground surface changes, floodway and floodplain boundaries, and base flood elevations (BFEs).
- **Necessary certifications:** The applicant must submit completed certifications, if any of the following conditions apply:
 - o **"No Rise" Condition:** If any part of the proposed project is to be located within the designated floodway, the applicant must submit an

engineering certification and supporting documentation demonstrating that the proposed encroachment will not result in any increase in base flood heights. If the project is in a riverine floodplain where no floodway has been adopted, the certification needs to show that the project will not exceed the allowable increase in flood elevation. An as-built certificate is required after construction is complete.

- o **Floodproofed Structure:** In the event a nonresidential structure is to be floodproofed, the applicant must submit a statement from a registered Professional Engineer or architect certifying that the design and methods of construction meet NFIP floodproofing standards. An as-built certificate is required after construction is complete.
- o **Enclosures below the Lowest Floor:** If an applicant designs an enclosure below the lowest floor using an alternative to the NFIP standard, a registered professional engineer or architect must certify the design. If a full-story enclosure is planned below the elevated lowest floor, the applicant must sign a non-conversion agreement indicating that the enclosure will not be converted into living space.

- **Necessary Federal and State Permits:** The applicant must acquire any necessary federal or state permits associated with the project (such as Section 404 permit, US Fish and Wildlife certification, land disturbance permit, etc.)

If the application is not complete or required documentation is missing, City staff uses a permit tracking system to send comments to the applicant. After the applicant has revised the application, it is resubmitted to City staff for review. Once all required fields are complete and all necessary documentation has been provided, City staff proceeds to route the application and supporting documentation to appropriate staff in either the Public Works Department or the Development Services Department for technical review.

Technical Compliance Review: Appropriate floodplain management staff review the technical aspects of the application packet to ensure compliance with local, State, and Federal requirements. This review includes:

- **NFIP compliance review:** Floodplain management staff verify that the plotted SFHA and/or floodway boundaries are correct and identify any obstructions in the floodway. Staff compares site plans to the FIRM, floodway map, and/or flood profile and evaluate the locations of any excavations, fill, stockpiles, clearing, grading, culverts, bridges, etc.

- **Building plans review:** Staff ensures that the lowest floor of any proposed structures are to be elevated 2 feet above the BFE, in accordance with the City's Floodplain Overlay District. The application packet must specify:
 - o the type of building(s) to be constructed and the anticipated use;
 - o the elevation of the lowest floor;
 - o the lowest adjacent grade;
 - o the type of foundation system;
 - o the existence of any enclosures below the lowest floor, along with electrical and plumbing areas for the enclosure;
 - o the types, sizes, and locations of flood openings to be used in enclosures; and
 - o the height to which a nonresidential structure must be floodproofed and the complete list of floodproofing techniques to be used, with detailed drawings.

- **City Engineer/Floodplain Administrator Review:** The City Engineer reviews the application packet to ensure that applicable technical standards were used in preparing the packet and that calculations are correct. Since the City Engineer is also the City's Floodplain Administrator, this review also double-checks the compliance review performed by floodplain management staff.

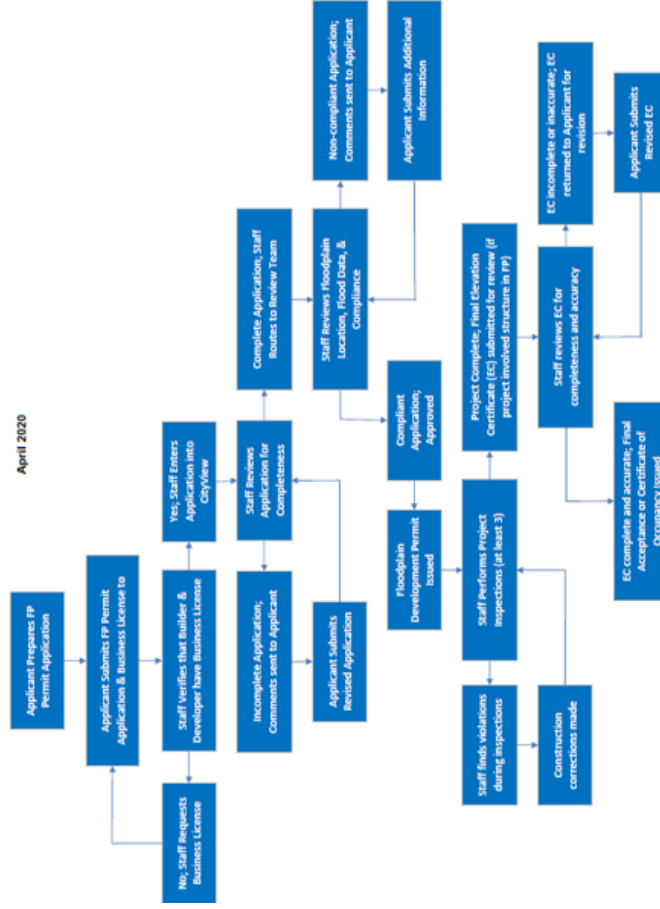
If any of these technical reviews result in discovery of non-compliance issues or missing data, City staff uses a permit tracking system to send comments to the applicant. Once the applicant has submitted required revisions or requested data, staff performs another technical review to ensure compliance.

Permit Issuance: If all requested information is correct and complies with all local, state, and Federal regulations, staff issues a Floodplain Development Permit through the City's permit tracking system. If the applicant is not willing to provide the required information or if the project cannot be brought into compliance, staff marks the Floodplain Development Permit application as incomplete in the City's permit tracking system and sends comments to the applicants as to the reason.

During the review process, City staff may determine the Floodplain Development Permit application requires FEMA review. In addition to City permits, a FEMA Conditional Letter of Map Revision (CLOMR)/Letter of Map Revision (LOMR) may be required.

Floodplain Permitting Process

April 2020



On-site Inspections

In accordance with the NFIP, on-site inspections are required for all development within a SFHA. Upon approval of a Floodplain Development Permit, a City inspector is assigned to the project. In accordance with the NFIP, the inspector is required to complete a series of at least three (3) inspections at each development within the SFHA.

First Inspection: With plans in hand, the inspector determines that the project identified on the proposed plans is consistent with the physical location of the site and verifies the location of the SFHA and floodway boundaries, as applicable. This

inspection is logged into City's permit tracking system as a permanent record for the project.

Second Inspection: As required by the NFIP, where an elevated or floodproofed structure is involved, the second inspection is scheduled just prior to the placement of the lowest floor of the building (i.e., immediately after foundation is formed and before concrete is poured). During this inspection, the City's inspector determines if the elevation of the lowest floor has been set as stipulated on the Floodplain Development Permit application and ensures that the type of foundation to be installed is consistent with that shown on the plans. The inspector also verifies floodway encroachment, if applicable. This inspection is logged into the City's permit tracking system as a permanent record for the project.

Third Inspection: The third inspection is scheduled at or near completion of a project or development, after improvements are fully complete. The City inspector's responsibilities include:

- determining if placement of fill, if used, meets the necessary slope and protection standards required by City ordinances;
- ensuring that any enclosures below the lowest floor have appropriately-sized openings;
- checking for floodway encroachment, if applicable;
- checking the anchoring system if the project involves manufactured or mobile homes and LP tanks; and
- receiving Post Construction Elevation Certificate.

The third inspection serves as the "as-built" condition and the inspection report is logged into the City's permit tracking system as a permanent record for the project, along with the final Construction Elevation Certificate.

The Floodplain Administrator, or their designee, is responsible for periodically checking to ensure the property remains in compliance with floodplain management regulations. Areas below the lowest floor can be easily modified and made into habitable space, which is a violation of floodplain regulations. In addition, periodically checking the property can help in determining unpermitted development or substantial improvements over time.

Construction Elevation Certificate Procedures

The City of Lee's Summit requires construction elevation certificates for all new and substantially improved structures in the SFHA, as described in Article 5, Division II of the City's Unified Development Ordinance (Floodplain Overlay District).

When a property owner or builder requests a permit for building a new structure, remodeling an existing structure, or rebuilding a damaged structure, the City's Development Services staff first reviews the parcel information using the City's Graphic Information System (GIS) system. City staff turns the FEMA National Flood Hazard layer on over the City's GIS parcel layer to determine if any part of the parcel is located within the SFHA. If a portion of the parcel is located within the SFHA, City staff will have a conversation with the applicant explaining the circumstances and restrictions of development.

During this conversation, staff explains that, while an official FEMA elevation certificate is not required to be completed and submitted at the time 1) the building plans are submitted for review and 2) the foundation framing is inspected, the City highly encourages completed elevation certificates at each stage to ensure that construction maintains compliance with the City's 2-foot freeboard requirement. Nonetheless, staff explains that the City will perform inspections before construction begins and before placement of the lowest floor of the building (i.e., immediately after foundation is formed and before concrete is poured) to ensure proper elevation and foundation type. Staff also explains that an official FEMA elevation certificate will be required to be submitted completely and accurately upon building completion, prior to final occupancy approval. A copy of the official FEMA elevation certificate and instructions are posted on the City's website for easy access, along with FEMA's highlighted checklist. If the applicant needs a paper copy, staff can provide one.

Each elevation certificate submittal is reviewed and approved by one of the City's Certified Floodplain Managers (CFMs) and the City's Floodplain Administrator. These staff members use the elevation certificate instructions and highlighted checklist available from FEMA to ensure that the elevation certificate is complete and accurate. If an elevation certificate is submitted that is not complete and correct, the elevation certificate is returned to the applicant with a list of items that need correction. The building permit process does not continue until the correct and complete elevation certificate conditions are met, including final acceptance and/or building occupancy.

A paper copy of the approved elevation certificate is forwarded to the Environmental Specialist in the Public Works Department to be stored in a filing cabinet by address. Electronic copies of elevation certificates are also maintained and tracked:

- on the Public Works server (P:\ENGINEERING DIVISION\STORMWATER\Admin - Floodplain (FEMA)\FP Permits Elev Certs & LOMAs) and
- in the City's CityView software program, by address

The Environmental Specialist also tracks all approved elevation certificates via Excel spreadsheet, searchable by date or address. Approved elevation certificates are available for review, upon inquiry from the public via phone call, electronic submission, or FOIA request.

Enforcement of Regulations

The Floodplain Overlay District of the City's UDO defines penalties for floodplain development violations. In addition, according to the NFIP, the City must utilize a stair-step approach that notifies the offender of the violation(s), providing a timeframe within which to remedy the situation prior to issuing fines, injunctions, etc.

Administrative Methods: If a violation is found during inspection of an active construction site, the City's inspector verbally notifies the developer of the violation and utilizes the City's permit tracking system to fail the inspection. The failed inspection provides a timeframe within which the violation is to be corrected. The inspector then follows up with subsequent inspections to ensure compliance. Such inspections and verbal notifications are recorded in the City's permit tracking system as permanent project documentation.

If the violation is serious or if the problem continues after the initial violation notification, the City has the authority to deny inspections, issue Stop Work Orders, and/or revoke the Floodplain Development Permit. Usually, during inspections a Stop Work Order is issued before the Floodplain Development Permit is revoked. Stop Work Orders are issued by a City inspector via the City's permit tracking system. The inspector notifies the developer of the Stop Work Order verbally, via email with an electronic copy of the Stop Work Order, and with a paper copy of the Stop Work Order posted on-site. All construction in the SFHA is required to stop at the site until the violation(s) are corrected.

If the situation is severe enough and/or the developer refuses to comply with a Stop Work Order, the Floodplain Administrator has the authority to revoke the Floodplain

Development Permit. This shall be done in writing, citing the issues and steps that have been taken to date to correct the violation.

Fines and Injunctions: The Floodplain Overlay District of the City's UDO provides mechanisms for court proceedings, financial penalties, and potential civil injunctions if the situation cannot be remedied in any other manner.

Variance and Appeals Process

The Floodplain Overlay District section of the City's UDO clearly defines the process for variances and appeals. The NFIP defines a variance as a grant of relief from the terms of the City's floodplain management regulation. A variance represents the City's approval to set aside floodplain regulations that were intentionally adopted to reduce the loss of life and property damages due to flooding; however, under no circumstances may the City waive State or Federal regulations. FEMA and the NFIP highly discourage the granting of variances. Variance issuance should be a rare occurrence and usually fail to reduce the risk of flooding. SEMA and/or FEMA will review all variances issued by the City during the next scheduled Community Assistance Visit (CAV). Too many variances issued by the City can result in State and Federal sanctions against the City from the NFIP.

If the City's Floodplain Administrator denies a Floodplain Development Permit application, the applicant can request a variance from the City's floodplain regulations. Any such variance request must be submitted to the City in writing on the City's Floodplain Management Variance Request Form. The City's Floodplain Administrator will review all submitted variance request documentation.

In accordance with the NFIP, variances shall not be issued for any work within a designated floodway if any increase in flood levels during the base flood discharge would result. Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level. Floodplain management variances will only be issued when the following conditions are met:

- a showing of a good and sufficient cause;
- a determination that failure to grant the variance would result in exceptional hardship to the applicant; and
- a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances,

cause fraud or victimization of the public, or conflict with existing local, State, or Federal laws or ordinances.

Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief. The applicant has the burden to prove exceptional hardships related to the property, including:

- loss of all beneficial or productive use;
- deprivation of any reasonable return on property;
- deprivation of all or any reasonable use;
- property rendered valueless;
- inability to develop property in compliance with floodplain regulations; and
- reasonable use cannot be made consistent with floodplain regulations.

Evidence provided by the applicant must be compelling, technical data and show no increased risk to life and safety. Reasons for granting the variance must be extraordinary. Insufficient reasons for variance issuance include:

- increased cost savings or profit margins on a project;
- significant depreciation of property value;
- convenience to the property owner;
- circumstances of the property owner versus circumstances of the land;
- a means to obtain a better financial return on investment;
- property similar to other in the neighborhood; and
- hardship created by the property owner's own actions.

If the Floodplain Administrator denies the variance request, a response letter to the applicant will be prepared detailing the reasons. In such instances, the applicant has the opportunity to appeal directly to the City's Board of Zoning Adjustment (BZA), who is the City's designated board for all appeals and variance requests. If, after thorough review, the BZA grants a variance, the Floodplain Administrator will document the justification for the variance, including detailed minutes from any BZA meetings. As required by the NFIP, the Floodplain Administrator will prepare a response letter notifying the applicant that the NFIP will assess higher insurance premiums for the property and that there is a greater risk to life and property because of the variance.

All correspondence related to variances will be retained, including the original Floodplain Development Permit application, any letters to the applicant from the Floodplain Administrator, the completed Floodplain Management Variance Request form, and the minutes from any BZA meetings during which the variance was granted. Paper copies of these

documents will be retained in the Lee's Summit Public Works Department office in a labeled cabinet dedicated to stormwater issues and floodplain permits. Electronic copies of the documents will be retained on the City's electronic server under the Engineering Division folder of the Public Works Department drive. Electronic copies of the documents will also be retained in the City's permit tracking system, filed by property address.

Complaint Investigation Procedures

The City of Lee's Summit utilizes public complaints to augment inspection and enforcement procedures. The public has several ways to contact the City regarding concerns or complaints including telephone, website, or an app for smartphones.

Telephone: The most common telephone numbers utilized for public complaints are the main City Hall number (816.969.1000), the main Public Works Department number (816.969.1800) or the main Development Services Department number (816.969.1200).

Website: The public can report most concerns through the City's website www.CityofLS.net under the "How Do I?" drop down menu. That webpage identifies emergency telephone numbers and allows the public to submit certain types of concerns through the City's LS Connect system. A series of instructions are available on that webpage to assist the public in reporting a concern. If the public has a concern that is not reportable via the LS Connect system, they can default to the telephone numbers mentioned above.

LS Connect App: If a person has a smartphone, they can download the LS Connect App for free on their phone to provide them a more convenient way to report concerns. If a concern or complaint is identified that is not reportable via the LS Connect system, they can default to the telephone numbers mentioned above.

When any such complaints are received, they are logged into one of two tracking systems. If received or forwarded to the Public Works Department, the complaint is logged into the City's CityWorks software program. If received or forwarded to the Development Services Department, the complaint is logged into the City's permit tracking system, currently known as CityView. Both programs allow staff to track contact with the complainant and other relevant parties, any work orders generated from complaints, court proceedings that may result from the complaint, and any documentation that is generated because of the complaint.

The Floodplain Administrator, or their designee, may be called upon to investigate complaints that are related to the City's floodplain management program. The Floodplain Administrator,

or their designee, will use such instances as opportunities to monitor any encroachments in the SFHA (fill, construction, mobile homes, etc.) that may have taken place without City knowledge.

FIRM Appeals and/or Revisions

FEMA continually updates and revises FIRMs. However, both residents and developers have the ability to request changes to FIRMs based on incorrect mapping or changes to the floodplain because of development. This process is completed through various Letters of Map Change (LOMCs). FEMA recognizes two basic types of LOMCs: Letters of Map Amendment (LOMA) and Letters of Map Revision (LOMR). A LOMA is an official amendment to a FIRM that establishes a property's location relative to the SFHA. A LOMR is an official revision to a FIRM that is based on the implementation of physical measures that affect hydrologic or hydraulic characteristics of a flooding source, which results in modification to the existing regulatory floodway, the SFHA, or the effective BFEs.

LOMAs: LOMAs can be submitted directly to FEMA without the involvement of City staff. While the LOMA requires elevation data prepared by a licensed surveyor, FEMA does not require fees for LOMA submittals. City staff may not have knowledge of LOMA requests so it is pertinent for the Floodplain Administrator, or their designee, to search FEMA's Map Service Center website annually for the most recent LOMAs that have been approved. LOMAs are public documents that officially amend the effective FIRM; therefore, the City must maintain copies of all known LOMAs even if the Floodplain Administrator did not review it prior to submittal to FEMA.

LOMRs: LOMRs must be submitted to the Floodplain Administrator for approval before they can be sent to FEMA for review. It is incumbent on the applicant to prepare all sufficient documentation, including a hydraulic and hydrologic analysis, with the LOMR. In addition, FEMA requires review and processing fees for LOMR submittals. LOMRs are public documents that officially revise the effective FIRM; therefore, the City must maintain copies of all LOMRs.

Copies of LOMC map revisions are attached to the master FIRMs that hang vertically in the Public Works Department office. Copies of the LOMC documentation are retained in accordance with the Floodplain Records Retention Policy.

Substantial Damage Estimation (SDE) Procedures

When a significant weather event (rain, flood, tornado, etc.) occurs, it is the responsibility of the Floodplain Administrator, or their designee, to begin the process of estimating substantial damage to those structures that are located within the SFHA, as soon as practicably possible. This process includes:

- public posting of notices;
- compiling a list of all flood-damaged structures within the SFHA;
- visually inspecting each structure for extent of damages using a substantial damage inspection form and a camera to aid in documentation. At least two photos of the structure in question must be taken, from two different angles. If the property owner will not allow access to the interior, an estimation is still required. In such instances, an estimation from the exterior is sufficient;
- utilizing either LS Mapper or the Jackson County Assessor's Office website, obtain Jackson County assessment information for the parcel in question;
- contacting the Jackson County Assessor's Office to request the market value of the property vs. the assessed value;
- determining the cost of repairs per square foot using the current year ICC valuation tables, which can be obtained from the City's Development Services Department;
- entering all of the information above into FEMA's SDE 3.0 Estimator program. Ensure all items are correct and that a substantial damage percentage is calculated at the end of the entry;
- using the correct letter template (less than 50% damage or greater than 50% damage), write a letter to the owner of the property that includes a copy of the SDE 3.0 results, a copy of the assessment information, and a copy of the SDE inspection form;
- scanning a copy of the letter and supporting documentation before mailing it to the resident;
- filing the electronic copy of the letter and supporting documentation on the City's electronic server under the Engineering Division folder of the Public Works Department drive; and
- updating the SDE Inspections Tracking Sheet after each significant weather event that involves substantial damage to structures within the SFHA.

The Floodplain Overlay District section of the City's UDO has a 10-year cumulative damage requirement for substantial damage and a 2-year cumulative damage requirement for repetitive loss. Keeping the tracking sheet current will help staff track cumulative substantial damage, which, when cost exceeds 50% of the structure's market value, means that the

property owner cannot make improvements to the structure (i.e., elevate the lowest floor of the structure above the BFE, move the structure out of the SFHA, or demolish the structure) until they meet the NFIP requirements.

Floodplain Records Retention Policy

In accordance with NFIP, all records related to floodplain development must be retained in perpetuity for future reference. These documents may include, but are not limited, to:

- floodplain management ordinances;
- FEMA Maps & Studies (Flood Hazard Boundary Maps [FHBM], Flood Boundary and Floodway Maps [FBFMs], Flood Insurance Rate Maps [FIRMs], Flood Insurance Studies [FIS], etc.);
- floodplain Development Permit applications and permits issued;
- Letters of Map Amendment (LOMA), Letters of Map Revision (LOMR), Letters of Map Change (LOMC), etc.;
- Construction Elevation Certificates & recorded 'as-built' elevations;
- findings of fact relative to variances and appeals;
- floodplain management data;
- "No-rise" certifications in cases of floodway development;
- copies of "submit for rate" requests on all structures built below the 1% annual chance flood level;
- other related Federal, State, or local permits, certifications, etc.; and
- NFIP correspondence

Paper copies of these documents, including current and historical FEMA maps, are retained in the Lee's Summit Public Works Department office in a labeled cabinet dedicated to stormwater issues and floodplain permits. Electronic FIRMs are available on FEMA's Map Service Center website. Electronic copies of construction elevation certificates, floodplain applications/permits, and LOMAs, LOMRs, and LOMCs are retained on the City's electronic server under the Engineering Division folder of the Public Works Department drive. Electronic copies of these documents are also retained in the City's permit tracking system, filed by each property address. Any of these documents are available to the public for review upon request. Electronic copies can be made available via email and paper copies can be requested via the Freedom of Information Act (FOIA) at the City Clerk's desk.

Administrative Forms Review

Once published, the Floodplain Administrator, or their designee, should review the City's administrative floodplain forms (Floodplain Development Permit Application, Floodplain Permit format, "No Rise" Certificate, Floodplain Management Variance Request form, etc.) on an annual basis to ensure accuracy. If necessary, the forms should be revised to reflect any City, State, or Federal regulatory changes. The electronic version of these forms are retained on the City's electronic server under the Engineering Division folder of the Public Works Department drive.

The City's Floodplain Development Permit application and "No Rise" Certificate are the official FEMA forms that have been reformatted to include the City logo. By virtue of FEMA's Community Rating System (CRS), the City is required to use the official FEMA Elevation Certificate form with no addition of the City logo. The Floodplain Administrator, or their designee, should check FEMA's website for the most current version of these forms at least annually and update any City forms to reflect FEMA changes. The most current and accurate version of these forms should be available to the public on the City's website.

The format for the City's Floodplain Development Permit and Floodplain Management Variance Request form have been developed by City staff based on the needs of the City. The permit is generated via The City's permit tracking system once a Floodplain Development Permit is approved. The variance form is available to applicants who have been denied a Floodplain Development Permit.

Approximate/Unnumbered A Zone Management

Although the City has participated in the NFIP since 1978, there may still be some flood areas on the City's FIRMs that are considered "Approximate A Zones" or "Unnumbered A Zones". Such flood zones have had no detailed hydraulic analysis performed; therefore, no BFEs or flood depths are included in the FIRMs. The lack of elevation data on a FIRM does not remove the requirement for elevating structures out of the floodplain.

The NFIP requires the City to obtain, review, and reasonably use any BFE or floodway data that is available from Federal, State, or local sources. In an Approximate A Zone situation, the City utilizes such data to establish a BFE. New construction and substantial improvements on residential structures are then required to elevate the lowest floor (including basement) at or above the City's freeboard requirement, which is higher than the established base flood elevation. In addition, using that same data, the City requires nonresidential structures to

either: a) floodproof or b) elevate the lowest floor (including basement) at or above the City's freeboard requirement.

The NFIP requires BFE and floodway data to be included with all subdivision or development proposals that are greater than 50 lots or 5 acres, whichever is the lesser. In addition, final as-built construction elevation certificates are required for all new floodplain developments.

The following list provides potential sources of information to obtain a BFE for a project:

- Preliminary, draft, or final Flood Insurance Studies (FIS) for Jackson County or adjacent counties, if the project is located near the county line.
- FIRMs can be used to determine the closest limit of the outer A Zone (floodplain) boundary to the project location. Assuming that the floodplain limit shown on the FIRM is the result of floodwaters reaching high ground, that floodplain limit could be used as the base flood elevation for a project. A licensed or registered surveyor could determine the elevation of that floodplain limit or the limit can be lain over the City's GIS to determine the BFE. However, if accuracy on either the FIRM or the GIS is uncertain, this method should not be used.
- Local sources of base flood elevation data: historical high water marks, river gauges, spillway elevations, or BFEs determined for adjacent or nearby private developments or public infrastructure projects (roads, bridges, water or sewer line installations, etc.).
- SEMA may have known BFEs or may have contacts or resources that can help find BFEs or floodway data.
- Hydraulic study performed by a professional engineer licensed in Missouri that establishes a pre-construction BFE.
- Topographic surveys performed by a professional land surveyor licensed in Missouri.

If a BFE cannot be determined through any means, the City may issue a permit without citing a BFE under the following provisions:

- A list of sources searched must be compiled along with the name of the researcher, the date(s) of search, and a written narrative as to why a BFE could not be determined. This document needs to have the written approval of the City's Floodplain Administrator.
- The lowest floor (including basement) must be above the highest natural adjacent grade to the proposed structure.
- The lowest floor (including basement) should be elevated at least 2 feet about the highest natural adjacent grade to facilitate a reasonable insurance rate.

Appendix A CityView Instructions for Floodplain Development Permit Process

The City uses a program called CityView to process and track most permits, including the Floodplain Development permit. This appendix explains the step-by-step procedures for accepting, entering, verifying, reviewing, approving, and issuing a Floodplain Development Permit, including procedures for inspections.

Appendix B Floodplain Management Forms

Enclosed in this appendix are the following floodplain management forms:

- Floodplain Development Permit Application
- "No Rise" Certificate
- Floodplain Management Variance Request Form
- NFIP Elevation Certificate

Other FEMA forms can be found on-line at www.FEMA.gov.

Appendix E SDE Planning and Preparation Checklists

This Appendix includes the following checklists:

- Checklist #1 – Post-Disaster Planning
- Checklist #2 – Field Preparations

CHECKLIST #1 – SUBSTANTIAL DAMAGE POST-DISASTER PLANNING

Item	Need	Completed	Description
1			Brief all elected officials as soon as possible after the event regarding the MFIP requirements for SDE determinations. Source: <ul style="list-style-type: none"> FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference, Chapter 7 (May 2020)
2			Select an SDE Manager. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 7.1 (August 2017)
3			Review NFIP requirements for SD and SI. Source: <ul style="list-style-type: none"> NFIP Regulations FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference, Chapter 7 (May 2020) FEMA 213, Answers to Questions about Substantially Damaged Buildings (May 1991)
4			Review SDE tool and User Manual to understand the SDE data requirements. Sources: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 3 & 4 (August 2017) FEMA SDE Best Practices (August 2017) FEMA SDE Tool and FAQs
5			Identify Flood Insurance Rate Maps (FIRMs) or other floodplain maps to review the boundaries of the SFHA. Data may include FIRMs, FBFMs, FIS reports, City maps showing previously flooded areas, and flood studies by State or other Federal agencies. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 8.1 (August 2017) Community NFIP Coordinator
6			Identify type, location, and City contacts for tax or GIS data for structures within the SDE inventory area that are potentially Substantially Damaged. Any or all of the following data will be useful: owner name, building address, type of house, non-residential building use, year of construction, square footage, number of stories, adjusted building values, number of years since last tax adjustment, and dates of additions or renovations. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 8.1 (August 2017)
7			Identify City street, address, or tax maps for delineating the boundaries of the SFHA. This will help delineate the maximum limits of the SDE inventory area while also showing addresses or lot locations. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 7 (August 2017)
8			Transfer SFHA boundaries from floodplain map to a base map that includes streets, addresses, or a tax map. Using the effective FIRM for the City, transfer the SFHA boundaries to a base map with named streets and either addresses or lot boundary lines. This will delineate the maximum limits of the SDE inventory to narrow the focus of the inspections while avoiding areas outside the SFHA. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 8.1 (August 2017)
9			Perform a curbside review of structures within the SDE inventory area. This helps the SDE Manager understand the scope and extent of the inventory area as well as the initial construction quality, size, and type of structures that will require inspections. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 7.3 & 9.5 (August 2017)
10			Identify the property and structure access procedures for locked or unoccupied structures. These procedures should be written and well defined; the City elected officials and legal counsel should then review and approve them to ensure that the procedures are legal and defensible. As a minimum, these procedures should include guidance on owner/resident interaction, and requirements for entering open property and structures when owners/residents are not present or when occupants are present but refuse entry to the structure or property. In addition, inspectors with permission to enter a structure need to verify that the structure is structurally stable and safe to enter. Source: <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 8.2 & 9.1 (August 2017)

11			<p>Pre-load available property data into the SDE tool. This data must be cross-referenced to a FIRM, address, or tax map so that the inspectors know which structure and property record are being inspected. Once the data are uploaded into the SDE tool, it will create property records. After the inspection is complete and the field data are entered, the records become SDE assessments. Source:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 3.7, 7.5, & 8.1 (August 2017)
12			<p>Identify the number and names of inspectors required for the inventory and form the inspection teams. The number of inspectors and inspection teams will determine the potential daily rate of completed inspections and a target completion date. Source:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 8.2 (August 2017)
13			<p>Identify inspection areas that may require permission or special access. Industrial parks, factories, private or gated subdivisions, islands, airports, school campuses, and other areas may require permission or other advance coordination to gain access to the property and structures.</p>
14			<p>Identify the proposed sequence of SDE inspections. Decide which subdivisions, neighborhoods, or areas will be inspected first, then next, and so on. The sequence will depend on the number of inspectors, their availability during the inspection process, the number of structures to inspect, and the proposed completion date of the inspections. The sequence may be revised as issues arise due to other post-disaster activities that may restrict or limit the inspection teams. Source:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 8.2 (August 2017)
15			<p>Prepare a list of local contacts for all project personnel and local agencies. This list should include, at a minimum, the SDE Manager, a responsible community official, inspectors, office staff, and the police, fire, and emergency management contacts. Source:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Section 8.1 (August 2017)
16			<p>Research, obtain, or develop base costs for determining reasonable structure values for residential and non-residential structures in the community. Resources include industry-accepted cost-estimating guides, building permit data, discussions with local contractors or realtors, adjusted tax data, guidance from adjacent communities, or personal experience with residential and nonresidential cost estimating. Sources:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 3.11, 8.1, & 8.4 (August 2017)
17			<p>Prepare a Letter of Introduction on City letterhead. The letter will be handed to occupants by the inspectors as they prepare to enter a new property. This should include, as a minimum, a brief discussion of the intent and scope of the SDE inspections, the normal work hours and days, the option of the structure owner or resident to refuse entry to the property or the structure, and the name, telephone number, and e-mail address of the SDE Manager or local official in charge of the SDE inventory. Source:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Appendix C (August 2017)
18			<p>Complete Substantial Damage determinations for structures located in the SFHA. Source:</p> <ul style="list-style-type: none"> FEMA P-784, SDE User Manual and Workbook, Sections 3.11 and 9 (August 2017)
19			<p>After Substantial Damage determinations are complete, issue permits for repair and reconstruction. Source:</p> <ul style="list-style-type: none"> FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference, Chapter 7 (May 2010)

CHECKLIST #2 – SUBSTANTIAL DAMAGE FIELD PREPARATIONS

Item	Need	Have	Description
1			Flood maps such as FIRMs or GIS overlays
2			Tax or address map with 100-year flood boundaries
3			Route or area map showing proposed areas and sequence for data collection
4			Tax data, including structure owner name, address, and zip code, mailing address and zip code, number of stories, and dimensions or habitable square footage (if available)
5			Copies of blank SDE Damage Inspection Worksheets
6			Copies of blank photo logs (if needed)
7			Photo ID badges for inspectors
8			Letter of Introduction with community point of contact (name and telephone number)
9			Clip boards, pens/pencils, steno pad or notebook, highlighter
10			100 ft tape measure (to obtain or verify structure dimensions)
11			Address board and dry erase markers
12			Hard hat, gloves, safety glasses and vest, steel-toe and steelshank shoes, safety vest, and flashlight
13			Cell phones or walkie-talkies
14			Digital camera, primary and alternate memory cards, and extra batteries
15			Verification that police, fire, and emergency management agencies have been advised of SDE inspections
16			Laptop computers or tablets with SDE tool installed and power cords with plug adaptors for use and re-charging in field vehicles
17			Rain or cold-weather gear

Procedures to review with inspectors prior to start of data collection:

Item	Need	Have	Description
1			Field safety procedures for dealing with extreme temperatures, wild and domestic animals, driving, parking, and accidents
2			SDE data collection and recording requirements
3			Guidance for entering locked, occupied, or unoccupied structures
4			Guidance on identifying initial construction quality for both residential and non-residential structures
5			SDE inspection procedures for residential structures
6			SDE inspection procedures for non-residential structures
7			Guidance on selecting the depreciation rating
8			Data collection routes and sequence
9			Guidelines for interaction with structure owners and occupants

Appendix F SDE Template Documents

This Appendix includes the following template documents that which can be altered to fit a specific disaster or event:

- Initial Substantial Damage Inspection Letter
- Press Release
- Posted Notice of Impending Inspection
- Door Hanger
- Unsafe Occupancy Notice
- Substantial Damage Inspection Form - Residential
- Substantial Damage Inspection Form - Commercial
- Photo Log
- Substantial Damage Letter; < 50% Market Value
- Substantial Damage Letter; > 50% Market Value
- Owner / Contractor Affidavit
- Intent Form
- Annual Letter to Repetitive Loss Property Owners in SFHA
- Annual Letter to Repetitive Loss Property Owners out of SFHA
- Annual Letter to Potential Risk Property Owners

:



LEE'S SUMMIT MISSOURI

Month XX, 20XX

Current Structure Owner or Resident

Address

Lee's Summit, MO 640XX

RE: Substantial Damage Inspection of Properties in the Floodplain

Dear Structure Owner or Resident:

As a result of the flooding that occurred between Month XX and XX, 20XX, City staff will be inspecting residences and businesses in the floodplain for evidence of Substantial Damage, as required by the City's Unified Development Ordinances and the National Flood Insurance Program (NFIP). These inspections apply to all structures within the 100-year (1%) floodplain as identified on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) for the City of Lee's Summit.

The City's inspectors will require approximately 30 minutes for a residential structures and about 60 minutes for non-residential structures to inspect damage both internal and external. The inspectors will document their observations and once the City has completed the Substantial Damage Estimation process, a written determination will be mailed to the owner of the inspected structures.

Please be advised that all repairs, reconstruction, and new construction are subject to the provisions of the City's Building Codes and may require permits before work can begin. Construction activities that are undertaken without proper permits are violations of the City's codes and may result in citations, fines, the required removal of non-compliant construction, or other legal action, if necessary.

If you refuse admittance to the City's inspectors, your address will be provided to the City Attorney for processing of formal legal request to inspect the indicated structure during normal business hours.

Questions regarding the inspection process may be directed to the Public Works Department at (816) 969-1800 or public.works@cityofls.net.

Sincerely,

Kara M. Starlin, CFM
Environmental Specialist



THE CITY OF LEE'S SUMMIT

News Release

FOR IMMEDIATE RELEASE

Date: **XX, XX**

To: All Media Contacts

Contact: George Binger, City Engineer and Floodplain Administrator, 969-1800

Subject: RESIDENTS WITH STORM DAMAGE REMINDED OF PERMIT
REQUIREMENTS

As property owners in the City contemplate cleanup and repair efforts following recent storm and flooding events, the City is reminding residents to obtain the proper permits before initiating repairs or rebuilding flood-damaged structures.

Permits are required as part of the City's participation in the National Flood Insurance Program (NFIP). By participating in the NFIP, all residents have access to flood insurance, flood disaster assistance, state and federal grants and loans, and buyout funds for flood-prone properties.

Special conditions apply to substantially-damaged buildings – those in which the total cost of repairs is at least 50 percent of the structure's pre-flood market value. If a building is found to be substantially damaged, regulations require that repairs cannot begin until compliance with the City's floodplain ordinance is demonstrated. In some cases, that may require repairs that include elevating or flood-proofing the structure to reduce the potential for future flood damage.

Property owners and residents with flood-damaged buildings should plan to attend a meeting at City Hall on **Month XX, 20XX** beginning at **XX** p.m. City staff will be prepared to answer questions at that time. If property owners are not able to attend this meeting, please contact the City's Floodplain Administrator, George Binger, at 816-969-1800 to obtain more information or repair and floodplain development permits.

****END****



NOTICE

Because this structure is located in a Special Flood Hazard Area (SFHA) as designated by the Federal Emergency Management Agency (FEMA), and was damaged by the recent storm, a Substantial Damage Assessment must be completed by the City of Lee's Summit in accordance with the City's Unified Development Ordinances.

Before beginning any repair work on this structure, you **MUST** call the City of Lee's Summit at 816-969-1800 to schedule an assessment. Failure to obtain reconstruction approval prior to beginning any repair work will result in a penalty.

Address: _____

Date: _____



STEPS TO FLOOD RECOVERY

Rebuild Responsibly

Permit - Get a PERMIT before starting repairs. A damage assessment and building permit are required before you rebuild. Starting work without a permit can result in fines. Contact the City before starting repairs:

City of Lee's Summit
Development Services Department
816.969.1200

Rebuild Smarter - Elevate electrical outlets, furnaces, A/C units, etc. Use flood resistant materials like closed foam board insulation and concrete wall board.

Mitigation Programs - Flood insurance policies often include additional funds to protect your home from future flooding; ask your insurance agent. Federal and state grant money may also be available to elevate, relocate, or buy out your flooded home. Contact the Public Works Department for possible information.

Returning to Your Home

Ask for Help - Contact your flood insurance agent to start your claim and ask family/friends for help.

Be Safe - If your home is badly damaged, STAY OUT! Contact the Development Services Department for a building inspection before re-entering. Watch out for damaged power lines. If you smell gas or hear a hissing noise, call your gas provider.

Prevent Fire and Electrocutation - Shut off gas and electricity to the home.

Document Damage - Take photographs before cleanup to document all damages and the high-water mark inside the home.

Check Basement - Do NOT step into standing water in the basement until electricity and gas have been shut off.

Check Drinking Water Safety - Contact the City's Water Utilities Department for water supply safety before use.

Flood Water Removal - Talk to a professional before pumping out flood water; pumping too quickly could damage or collapse foundation walls.

Mold Prevention - Visit the CDC's website www.cdc.gov/mold for guidance on safe mold removal and prevention procedures.

STEPS TO FLOOD RECOVERY

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Development Services Department
816.969.1200

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Returning to Your Home

Ask for Help - Contact your flood insurance agent to start your claim and ask family/friends for help.

Be Safe - If your home is badly damaged, STAY OUT! Contact the Development Services Department for a building inspection before re-entering. Watch out for damaged power lines. If you smell gas or hear a hissing noise, call your gas provider.

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Document Damage - Take photographs before cleanup to document all damages and the high-water mark inside the home.

Check Basement - Do NOT step into standing water in the basement until electricity and gas have been shut off.

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STEPS TO FLOOD RECOVERY

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Development Services Department
816.969.1200

Rebuild Smarter - Elevate electrical outlets, furnaces, A/C units, etc. Use flood resistant materials like closed foam board insulation and concrete wall board.

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Prevent Fire and Electrocutation - Shut off gas and electricity to the home.

Document Damage - Take photographs before cleanup to document all damages and the high-water mark inside the home.

Check Basement - Do NOT step into standing water in the basement until electricity and gas have been shut off.

Check Drinking Water Safety - Contact the City's Water Utilities Department for water supply safety before use.

Flood Water Removal - Talk to a professional before pumping out flood water; pumping too quickly could damage or collapse foundation walls.

Mold Prevention - Visit the CDC's website www.cdc.gov/mold for guidance on safe mold removal and prevention procedures.

UNSAFE NOTICE

This structure has been deemed unsafe for occupancy per Section 7-181 of the Lee's Summit Code of Ordinances, and shall not be occupied due to the following conditions:

- | | |
|---|---|
| <input type="checkbox"/> Unsanitary | <input type="checkbox"/> Inadequate means of egress |
| <input type="checkbox"/> Inadequate light & ventilation | <input type="checkbox"/> Fire hazard |
| <input type="checkbox"/> Improper occupancy | <input type="checkbox"/> Inadequate maintenance |
| <input type="checkbox"/> Otherwise dangerous to human occupancy or public welfare | |

Date

Development Services Department



Development Services

220 SE Green Street | Lee's Summit, MO 64063 | P: 816.969.1200 | F: 816.969.1221 | cityofLS.net

RESIDENTIAL - SUBSTANTIAL DAMAGE FIELD INSPECTION FORM

PROPERTY ADDRESS: _____

Property Owner's Right-of-Entry Certification and Release

I, the undersigned, being the owner of the land and all structures located at the address indicated below, do hereby grant the City of Lee's Summit, its agents, officials, and employees permission to enter said property for a period of 60 days to complete a substantial damage/substantial improvement assessment in compliance with the National Flood Insurance Program (NFIP) regulations for Substantial Damage Determinations in accordance with 44 CFR 60.3 and Article 6 of the City's UDO. I, the undersigned, do hereby release and forever discharge the City of Lee's Summit, its agents, officials, and employees from any and all claims, demands, or actions for damages for any and all personal injuries, or loss or damage to property sustained in or growing out of said assessment and from complications arising therefrom.

I, the undersigned, have had an opportunity to read this agreement and I understand the conditions, waivers, and releases set forth herein.

Owner/Resident First and Last Name (printed) _____ Owner/Resident Name (signed) _____ Date _____
Phone Number _____ Witness (Inspector Name - printed and signed) _____

☐ Check box if owner refuses inspection ☐ Check box if property is vacant

ADDRESS Tab (SDE 3.0 Software)

SUBDIVISION INFORMATION

Subdivision:	Parcel #:
Lot #:	
Elevation of Lowest Floor:	Datum:

COMMUNITY INFORMATION

NFIP Community ID: 290174	NFIP Community Name: City of Lee's Summit, MO
Latitude:	Longitude:

BUILDING ADDRESS

Owner First Name:	Owner Last Name:
Address:	
City: Lee's Summit	State: Missouri
County: Jackson or Cass (circle one)	Zip Code:
Phone Number:	Care of:



MAILING ADDRESS ☐ Check box if address is same as above

First Name:	Last Name:
Address:	
City:	State:
County:	Zip Code:
Phone Number:	Care of:

STRUCTURE/DAMAGE/NFIP INFORMATION Tab (SDE 3.0 Software)

STRUCTURE ATTRIBUTES (circle all that apply)

Residence Type:	Single Family (SF)	Town or Row House	Manufactured House (MH)		
Foundation:	Continuous Wall w/ Slab (standard)	Basement	CrawlSpace	Piers	Slab-on-Grade
Superstructures:	Stud-Frame (standard)	Common Brick	ICF	Masonry	
Roof Coverings:	Asphalt or Wood Shingles (standard)	Clay Tile	Standing Seam (metal)	Slate	
Exterior Finish:	Siding/Stucco (standard)	Brick Veneer	EIFS	Common Brick, structural	None
HVAC System:	Heating &/or Cooling	None			
# Stories:	One (standard)	Two or More			

STRUCTURE INFORMATION

Year of Construction:					
Quality of Construction:	Low	Budget	Average	Good	Excellent
Residence Information: (if necessary)					

INSPECTOR INFORMATION

Inspector Name:					
Inspector Phone Number:					Date of Inspection:



DAMAGE INFORMATION

Date Damage Occurred:					
Cause of Damage:	Fire	Flood	Flood & Wind	Seismic	Wind
If 'Other', describe:					
Physical damage?	Yes	No			
Duration of Flood:	Hours (#):	Days (#):			
Depth of Flood Above Ground (estimated to nearest 0.5 foot):					
Depth of Flood Above First Floor (estimated to nearest 0.5 foot):					

NFIP INFORMATION

FIRM Panel #:	Date of FIRM Panel:
FIRM Zone:	Base Flood Elevation:
Regulatory Floodway:	Yes No Possible

COMMUNITY INFORMATION

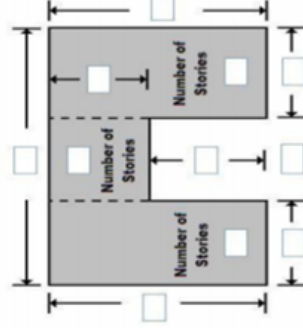
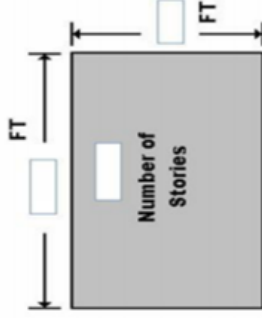
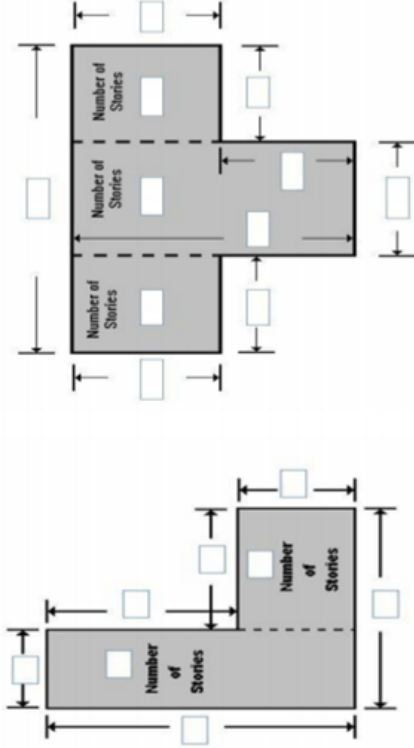
Describe any pertinent information about the community that impacts this property:

COST Tab (SDE 3.0 Software)

SQUARE FOOTAGE

Calculate or Enter Square Footage (using diagrams below):	
Total Square Footage (if available):	
Base Cost Per Square Foot:	Geographic Adjustment:

Using the following diagrams, select the appropriate diagram of structure footprint (or draw your own) and enter structure dimensions along with the number of stories:



ADJUSTMENTS

Single-Family House (Sf)	Quantity	Units	Unit Cost	Item Cost
Roofing		Sq. Ft.		
Heating / Cooling		Each		
Appliances		Each		
Fireplaces		Each		
Porch/Breezeways		Sq. Ft.		
Garage		Sq. Ft.		
Manufactured House (MH)	Quantity	Units	Unit Cost	Item Cost
Expandable		Sq. Ft.		
Carport		Sq. Ft.		
Open Porch		Sq. Ft.		
Enclosed Porch		Sq. Ft.		
Decks		Each		
Skirting		Sq. Ft.		
Fireplaces		Each		
Additional Adjustments	Quantity	Units	Unit Cost	Item Cost

Cost Data Reference (source or name):				
Cost Data Date:				

NOTE: The computed Actual Cash Value (ACV) for the structure will be calculated once the square footage, base cost, cost adjustments, cost add-ons, and depreciation percentage are entered into the SDE 3.0 software.



DEPRECIATION RATING (circle one)

1	Very Poor Condition	2	Requires Extensive Repairs	3	Requires Some Repairs
4	Average Condition	5	Above Average Condition	6	Excellent Condition
7	Other (explain):				
If 'Other', provide Depreciation Percentage:					

ELEMENT PERCENTAGES Tab (SDE 3.0 Software)

ELEMENT PERCENTAGES (circle all that apply)

NOTE: The inspector needs only enter the % Damaged data here. The data in the Element %, Item Cost, and Damage Values columns will be populated based on the selected attributes once all the data are entered into the SDE 3.0 software.

Item	% Damaged	Element %	Item Cost	Damage Values
Foundation (Sf only)				
Superstructure				
Roof Covering				
Exterior Finish				
Interior Finish				
Doors and Windows				
Cabinets and Countertops				
Floor Finish				
Plumbing				
Electrical				



SDE OUTPUT SUMMARY Tab (SDE 3.0 Software)
Optional User-Entered Data

SDE OUTPUT SUMMARY

Professional Market Appraisal:	
Tax Assessed Value:	Tax Factor Adjustment:
Adjusted Tax Assessed Value:	
Contractor's Estimate of Damage:	
Community's Estimate of Damage:	

NOTES:

- **Electrical:** Only include components submerged or impacted. Wiring should not be included unless it is the old cloth type. (e.g., in flood situation, if water mark is above receptacles, include all flooded receptacles in % damaged estimation but not wiring, unless wiring is old cloth type).
- **Drywall:** Include 1-foot of drywall above a flood water mark. If water damage is from ceiling, include 1-foot of drywall left and/or right of any water impacted area.
- **Wall Interiors:** Consider all interior components of a wall that may not be visible (studs, insulation, etc.)
- **Built-in Features:** Only include features that are attached (garages, cabinets, decks, shelving, appliances, etc.). If feature is not physically attached to structure, do not include it. Exception is microwaves; microwaves are not included regardless of attachment.
- **Deferred Maintenance:** Consider items that needed repair prior to the cause of damage. Any such items are not included.



COSTS FOR SUBSTANTIAL IMPROVEMENTS AND REPAIR OF SUBSTANTIAL DAMAGE

Included Costs

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
 - o Foundations (e.g., spread/continuous foundation footings, perimeter walls, pilings, posts, etc.)
 - o Monolithic or other types of concrete slabs
 - o Bearing walls, tie beams, trusses
 - o Joists, beams, subflooring, framing, ceilings
 - o Interior non-bearing walls
 - o Exterior finishes (e.g., brick, stucco, siding, painting, and trim)
 - o Windows and exterior doors
 - o Roofing, gutters, and downspouts
 - o Hardware
 - o Attached decks and porches
- Interior finish elements, including:
 - o Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
 - o Bathroom tiling and fixtures
 - o Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
 - o Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
 - o Interior doors
 - o Interior finish carpentry
 - o Built-in bookcases and furniture
 - o Hardware
 - o Insulation



- Utility and service equipment, including:
 - HVAC equipment
 - Plumbing fixtures and piping
 - Electrical wiring, outlets, and switches
 - Light fixtures and ceiling fans
 - Security systems
 - Built-in appliances
 - Central vacuum systems
 - Water filtration, conditioning, and recirculation systems
- Excluded Costs**
- Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:
- Clean-up and trash removal
 - Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
 - Costs to obtain or prepare plans and specifications
 - Land survey costs
 - Permit fees and inspection fees
 - Carpeting and re-carpeting installed over finished flooring such as wood or tiling
 - Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
 - Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
 - Plug-in appliances such as washing machines, dryers, and stoves

GUIDANCE FOR ESTIMATING PERCENT DAMAGE ON RESIDENTIAL STRUCTURES

Foundation		Description	
0-25%	Threshold Markers	Continuous perimeter foundations, footings, and piers for internal beams and floor loads. Footing depth averages between 30 inches and 42 inches below ground level. Materials include unreinforced cast-in-place concrete, unreinforced masonry or concrete masonry units (CMUs), concrete slab on grade, or raised slab construction.	Some undermining but no visible cracking at concrete slab.
		Water level does not rise to the first floor of the structure. No scouring at the footings.	Soils are saturated.
25-50%	Damage Threshold	Water level rises just above first floor level. Limited scouring at the footings.	Undermining of the concrete slab - major corners - hairline cracks only.
		Water level is 4-7 feet or higher against the outside of the building. Limited scouring at the footings.	Cracks noted on or along the foundation walls.
Water level is 7 feet or higher against the outside of the building. Limited scouring at the footings.		Significant undermining of the concrete slab - major cracking and separation of the concrete slab.	
Water level is 7 feet or higher against the outside of the building. Limited scouring at the footings.		Portions of the foundation are damaged or missing.	
Water level is 7 feet or higher against the outside of the building. Limited scouring at the footings.		Structure has been knocked off its foundation.	
50-75%	Common Damage	Soils are saturated and unstable	Floodwaters extend over the top of the foundation system - significant undermining of the foundation walls. Some cracking of the masonry/concrete foundation is noted. Settlement noted at the footings. Foundation is unstable. Foundation is cracked. Foundation is displaced and missing. Foundation is cracked. Foundation is displaced and missing. Foundation is cracked. Foundation is displaced and missing.
Water level rises just above first floor level. Limited scouring at the footings.		Short-term foundation - undermined but no structural support systems.	
Over 75%	Special Considerations for Coastal/High Velocity Floods	Water level does not rise to the first floor of the structure. No scouring at the footings.	Coastal floods may show more evidence of scouring at the supports - the foundation system may be better designed to resist this scouring action.
Water level rises just above first floor level. Limited scouring at the footings.		High velocity floodwaters may create erosion/scouring that the building has not been designed to resist.	

Basic Flooding Model Assumptions:
 1) Medium height freshwater flooding; limited duration. No high-velocity action; no wave action.
 2) A 1-story house (without a basement) is used for this example house to establish the Categories of Work percentages of total costs.

PROPERTY ADDRESS: _____

Property Owner's Right-of-Entry Certification and Release

I, the undersigned, being the owner of the land and all structures located at the address indicated below, do hereby grant the City of Lee's Summit, its agents, officials, and employees permission to enter said property for a period of 60 days to complete a substantial damage/substantial improvement assessment in compliance with the National Flood Insurance Program (NFIP) regulations for Substantial Damage Determinations in accordance with 44 CFR 60.3 and Article 6 of the City's UDO. I, the undersigned, do hereby release and forever discharge the City of Lee's Summit, its agents, officials, and employees from any and all claims, demands, or actions for damages for any and all personal injuries, or loss or damage to property sustained in or growing out of said assessment and from complications arising therefrom.

I, the undersigned, have had an opportunity to read this agreement and I understand the conditions, waivers, and releases set forth herein.

Owner First and Last Name (printed) _____ Owner Name (signed) _____ Date _____

Phone Number _____ Witness (Inspector Name - printed and signed) _____

☐ Check box if owner refuses inspection ☐ Check box if property is vacant

ADDRESS Tab (SDE 3.0 Software)

SUBDIVISION INFORMATION

Subdivision:	Parcel #:
Lot #:	
Elevation of Lowest Floor:	Datum:

COMMUNITY INFORMATION

NFIP Community ID: 290174	NFIP Community Name: City of Lee's Summit, MO
Latitude:	Longitude:

BUILDING ADDRESS

Owner First Name:	Owner Last Name:
Address:	
City: Lee's Summit	State: Missouri
County: Jackson or Cass (circle one)	Zip Code:
Phone Number:	Care of:



MAILING ADDRESS ☐ Check box if address is same as above

First Name:	Last Name:
Address:	
City:	State:
County:	Zip Code:
Phone Number:	Care of:

STRUCTURE/DAMAGE/NFIP INFORMATION Tab (SDE 3.0 Software)

STRUCTURE ATTRIBUTES/INFORMATION

Year of Construction:		# of Stories:	1	2-4	5+
Structure Use:					
Sprinkler System:	Yes	No	Conveyance:	Yes	No
Quality of Initial Construction:		Low	Budget	Average	Good
Structure Information:					Excellent
(if necessary)					

INSPECTOR INFORMATION

Inspector Name:			Date of Inspection:
Inspector Phone Number:			

DAMAGE INFORMATION

Date Damage Occurred:					
Cause of Damage:	Fire	Flood	Flood & Wind	Seismic	Wind
If 'Other', describe:					
Physical damage?	Yes	No			
Duration of Flood:	Hours (#):		Days (#):		
Depth of Flood Above Ground (estimated to nearest 0.5 foot):					
Depth of Flood Above First Floor (estimated to nearest 0.5 foot):					



NFIP INFORMATION

FIRM Panel #:		Date of FIRM Panel:	
FIRM Zone:		Base Flood Elevation:	
Regulatory Floodway:	Yes	No	Possible

COMMUNITY INFORMATION

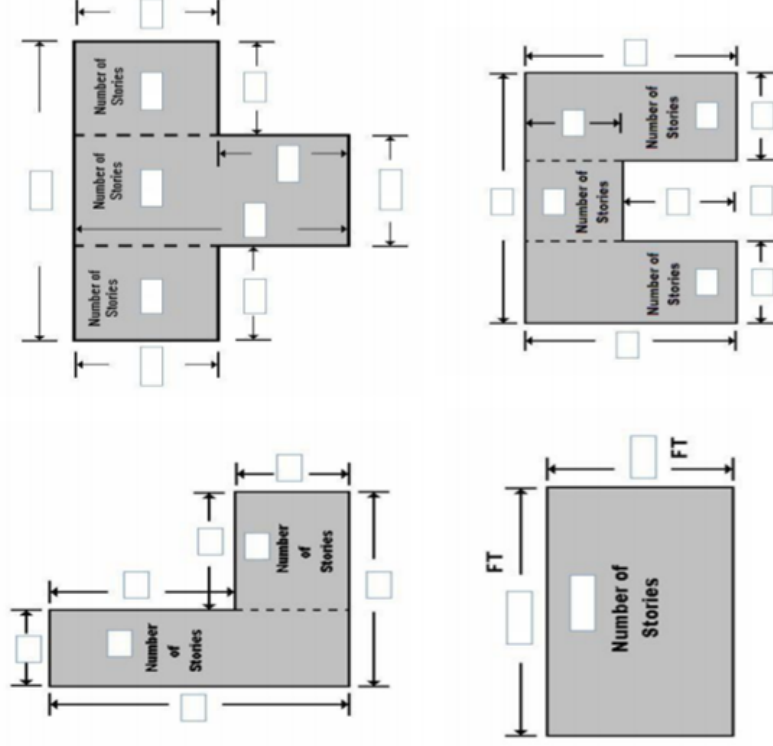
Describe any pertinent information about the community that impacts this property:

COST Tab (SDE 3.0 Software)

SQUARE FOOTAGE

Calculate or Enter Square Footage (using diagrams below):			
Total Square Footage (if available):			
Base Cost Per Square Foot:		Geographic Adjustment:	

Using the following diagrams, select the appropriate diagram of structure footprint (or draw your own) and enter structure dimensions along with the number of stories:



COSTS FOR SUBSTANTIAL IMPROVEMENTS AND REPAIR OF SUBSTANTIAL DAMAGE

Included Costs

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
 - Foundations (e.g., spread/continuous foundation footings, perimeter walls, pilings, posts, etc.)
 - Monolithic or other types of concrete slabs
 - Bearing walls, tie beams, trusses
 - Joists, beams, subflooring, framing, ceilings
 - Interior non-bearing walls
 - Exterior finishes (e.g., brick, stucco, siding, painting, and trim)
 - Windows and exterior doors
 - Roofing, gutters, and downspouts
 - Hardware
 - Attached decks and porches
- Interior finish elements, including:
 - Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
 - Bathroom tiling and fixtures
 - Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
 - Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
 - Interior doors
 - Interior finish carpentry
 - Built-in bookcases and furniture
 - Hardware
 - Insulation

- Utility and service equipment, including:

- HVAC equipment
- Plumbing fixtures and piping
- Electrical wiring, outlets, and switches
- Light fixtures and ceiling fans
- Security systems
- Built-in appliances
- Central vacuum systems
- Water filtration, conditioning, and recirculation systems

Excluded Costs

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and recarpeting installed over finished flooring such as wood or tiling
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes
- Plug-in appliances such as washing machines, dryers, and stoves





LEE'S SUMMIT MISSOURI

Month XX, 20XX

Current Structure Owner or Resident

Address

Lee's Summit, MO 640XX

RE: Substantial Damage Determination

Dear Structure Owner or Resident:

As required by FEMA, the City of Lee's Summit performed a Substantial Damage Inspection at the above-referenced residential structure on Month XX, XX following the storm event that took place on Month XX, XX. From this inspection, the City of Lee's Summit has determined that your residential structure has received XX% damage of the pre-damage structure value, resulting from the Month XX, XX flooding.

Please be advised that all repairs, reconstruction, and new construction are subject to the provisions of the City's Building Codes and will likely require permits before work can begin. Construction activities that are undertaken without proper permits are violations of the City's codes and may result in citations, fines, the required removal of non-compliant construction, or other legal action, if necessary.

Questions regarding the Substantial Damage Estimation process may be directed to the Environmental Specialist in the Public Works Department at (816) 969-1800 or public.works@cityofls.net. Questions regarding the permitting process may be directed to the Development Services Department at (816) 969-1200.

Sincerely,

Kara M. Starlin, CFM
Environmental Specialist



Public Works Engineering Division
220 SE Green Street | Lee's Summit, MO 64063 | P: 816.969.1800 | lspe.net

Permit Application Requirements for Substantial Improvement and Repair of Substantial Damage

Please contact the City's Environmental Specialist at 816.969.1800 if you have questions regarding the City's substantial improvement and substantial damage requirements. Your building may have to be brought into compliance with the City's Floodplain Ordinances for new construction or improvements.

Permit applications to work on existing buildings located in the Special Flood Hazard Area (SFHA) must include the following:

- Current photographs of the exterior (front, rear, sides)
- If your building has been damaged, include photographs of the interior and exterior; provide pre-damage photos of the exterior, if available
- Detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs
- Cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its pre-damage condition
- Current elevation certificate or elevation survey
- A deed restriction and non-conversion agreement for any proposed enclosure that is less than 6 feet in height and below grade (such as a basement)
- (For non-residential structures proposed for floodproofing only) A Floodproofing Certification signed and sealed by a Missouri-licensed Architect or Engineer.
- A market value appraisal prepared by a licensed professional appraiser, if you disagree with the most recent tax assessment value of the building
- Owner's affidavit (signed and dated)
- Contractor's affidavit (signed and dated)



Public Works Engineering Division
220 SE Green Street | Lee's Summit, MO 64063 | P: 816.969.1800 | lspe.net



LEE'S SUMMIT MISSOURI

Month XX, 20XX

Current Structure Owner or Resident
Address
Lee's Summit, MO 640XX

RE: Substantial Damage Determination

Dear Structure Owner or Resident:

On Month XX, XX, the City of Lee's Summit performed a Substantial Damage Estimation at the above-referenced structure as a result of the recent storms that took place on Month XX, XX. As a result, the City of Lee's Summit has determined that your structure has received greater than 50% damage of the pre-damage structure value.

Under the requirements of the City's Unified Development Ordinance (UDO) and the National Flood Insurance Program (NFIP), structures located within the 100-year (1%) floodplain that received damage of any origin whereby the cost of restoring the structure would equal or exceed 50% of the structure's pre-damage value, must be brought into compliance with the ordinance. Residential structures with greater than 50% damage must either be removed from the 100-year floodplain or have the lowest floor (including basement) elevated at or above the 1000-year base flood elevation (BFE). Failure to comply with this requirement will result in citations, fines, or other legal action, as necessary, against the owner of the structure.

Please be advised all repairs, reconstruction, and new construction are subject to the provisions of the City's Building Codes and will require permits before work can begin. Construction activities that are undertaken without proper permits are violations of the City's codes and may result in citations, fines, the required removal of non-compliant construction, or other legal action, if necessary.

Questions regarding the Substantial Damage Estimation process may be directed to the Public Works Department at (816) 969-1800 or public.works@cityofls.net. Questions regarding the permitting process may be directed to the Development Services Department at (816) 969-1200.

Sincerely,

Kara M. Starlin, CFM
Environmental Specialist



Public Works Engineering Division
220 SE Green Street | Lee's Summit, MO 64003 | P: 816.969.1800 | F: 816.969.1809 | jsgw.net

Permit Application Requirements for Substantial Improvement and Repair of Substantial Damage

Please contact the City's Environmental Specialist at 816.969.1800 if you have questions regarding the City's substantial improvement and substantial damage requirements. Your building will have to be brought into compliance with the City's Floodplain Ordinances for new construction or improvements.

Permit applications to work on existing buildings located in the Special Flood Hazard Area (SFHA) must include the following:

- Current photographs of the exterior (front, rear, sides)
- If your building has been damaged, include photographs of the interior and exterior; provide pre-damage photos of the exterior, if available
- Detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs
- Cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its pre-damage condition
- Current elevation certificate or elevation survey
- A deed restriction and non-conversion agreement for any proposed enclosure that is less than 6 feet in height and below grade (such as a basement)
- (For non-residential structures proposed for floodproofing only) A Floodproofing Certification signed and sealed by a Missouri-licensed Architect or Engineer.
- A market value appraisal prepared by a licensed professional appraiser, if you disagree with the most recent tax assessment value of the building
- Owner's affidavit (signed and dated)
- Contractor's affidavit (signed and dated)



Public Works Engineering Division
220 SE Green Street | Lee's Summit, MO 64003 | P: 816.969.1800 | F: 816.969.1809 | jsgw.net

OWNER / CONTRACTOR: SUBSTANTIAL IMPROVEMENT OR REPAIR OF SUBSTANTIAL DAMAGE

PROPERTY ADDRESS	CONTRACTOR NAME
PARCEL ID NUMBER	CONTRACTOR CONTACT
OWNER'S NAME	CONTRACTOR PHONE NUMBER
OWNER'S ADDRESS	CONTRACTOR LICENSE NUMBER
OWNER PHONE NUMBER	DATE OF CONTRACTOR ESTIMATE

OWNER: I hereby attest that the description included in the permit application for the work on the existing building that is located at the property identified above is all of the work that will be done, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement. I further attest that I requested the above-identified contractor to prepare a cost estimate for all of the work, including the contractor's overhead and profit. I acknowledge that if, during the course of construction, I decide to add more work or to modify the work described, that the City will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature:

Date:

Notarized:

CONTRACTOR: I hereby attest that I have personally inspected the building located at the above-referenced address and discussed the nature and extent of the work requested by the owner, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement.



At the request of the owner, I have prepared a cost estimate for all of the improvement work requested by the owner and the cost estimate includes, at a minimum, the cost elements identified by the [community] that are appropriate for the nature of the work. If the work is repair of damage, I have prepared a cost estimate to repair the building to its pre-damage condition. I acknowledge that if, during the course of construction, the owner requests more work or modification of the work described in the application, that a revised cost estimate must be provided to the City, which will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I also understand that I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature:

Date:

Notarized:





LEE'S SUMMIT MISSOURI

INTENT TO RAISE OR DEMOLISH FORM

PROPERTY ADDRESS	PARCEL ID NUMBER
OWNER'S NAME	OWNER'S PHONE NUMBER
OWNER'S ADDRESS	DATE OF SUBSTANTIAL DAMAGE/IMPROVEMENT DETERMINATION

According to the Federal Emergency Management Agency (FEMA), all residential structures substantially damaged by _____ [disaster name/type] shall be raised or demolished as soon as possible, keeping in mind the 6-year eligibility of Increased Cost of Compliance (ICC) funds.

As the owner, I intend to bring the residential structure at the above-referenced property into compliance with the City's Floodplain Ordinance and FEMA requirements by _____ [date]. I understand that no improvements can be made to the existing structure and that the structure can only be raised or demolished and rebuilt in compliance with the City's Floodplain Ordinance. I understand that failure to comply with the required floodplain regulations may result in penalties from the City of Lee's Summit and/or FEMA.

I intend to RAISE / DEMOLISH (circle one) the structure at the above referenced property.

Owner's Signature:

Date:

Notarized:





LEE'S SUMMIT MISSOURI

January XX, 20XX

Resident and/or Property Owner

Address

Lee's Summit, MO XX

RE: Repetitive Loss Property, Annual Letter

Dear Resident or Property Owner:

You have received this letter because your property, listed above, is located in an area(s) that has flooded in the past as a result of flash flooding from localized rain event(s). This letter is also sent as a requirement of the City's participation in the National Flood Insurance Program (NFIP) Community Rating System (CRS) program. The City is a Class 9 CRS Community; therefore, Lee's Summit property owners will receive a 5% discount on flood insurance premiums.

Because your property is located in an area prone to flooding, the City wants to advise you of some things you can do to protect yourself and your home from flood damage:

1. Prepare for flooding by:
 - Knowing the flood safety guidance attached to this letter.
 - Knowing how to shut off the electricity and gas to your house.
 - Making a list of emergency numbers and identifying a safe place to go.
 - Making a household inventory, especially of basement contents.
 - Putting insurance policies, valuable papers, medicine, etc. in a safe place.
 - Putting cleaning supplies, camera, waterproof boots, etc. in a handy place.
 - Developing a disaster response plan – See the Red Cross website for a copy of the brochure "Your Family Disaster Plan" at:
<http://www.redcross.org/prepare/location/home-family-plan>
 - Getting a copy of the "Repairing Your Flooded Home" brochure from the Red Cross website.



Public Works Engineering Division
220 SE Green Street | Lee's Summit, MO 64083 | P: 816.969.1800 | F: 816.969.1809 | lsprw.net

2. Consider these permanent flood protection measures:

- Mark your fuse or breaker box to show the circuits in any floodable areas. Turning off the power to such areas can reduce property damage and save lives.
- If the lowest flood of the house is below the Base Flood Elevation (BFE), consider elevating the house about that level.
- Check your home for water entry points. These can be basement windows, the basement stairwell, doors, and dryer vents. These points can be protected with low walls or temporary shields.
- Install a floor drain plug, standpipe, overhead sewer, or sewer backup valve to prevent sewer backup flooding.
- More information can be found in the "Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding" at:
<http://www.madcat.com/media/fema/FEMA-L235-2009.pdf>
- Note that some flood protection measures may need a building permit and others may not be safe for your type of building, so be sure to talk to the City's Development Services Department at 816-969-1200 if you have questions about making improvements to your home or property.

3. Contact the City for information on financial assistance.

- FEMA has several financial assistance programs that may be available to communities for flood loss prevention that allow for structure elevation above the flood level or property acquisition including: Flood Mitigation Assistance (FMA), a Hazard Mitigation Grant Program (HMGP), and a Pre-Disaster Mitigation Program (PDM). If you are interested in learning more about whether your property may be eligible for financial assistance through such a program, please contact the City's Emergency Manager in the Fire Department.

4. Get a flood insurance policy.

- Homeowner's and renters insurance policies do not cover damage from floods; however, because the City participates in the NFIP, you can purchase a separate flood insurance policy. Flood insurance policies are backed by the Federal government and are available to everyone located within City limits, even properties that have never flooded. Because the City is a Class 9 CRS Community, Lee's Summit property owners will receive a 5% discount on flood insurance premiums.
- Some residents have purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Usually these policies just cover the structure and not the contents. However, many times the damage to the furniture and contents exceeds that of the



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- structure. It is recommended that you consider purchasing coverage on building contents in addition to coverage of the structure.
- In most cases, there is a 30-day waiting period before NFIP flood insurance coverage takes effect so it is recommended that flood insurance be purchased independently of an impending flood event.
 - Contact your insurance agent for more information on rates and coverage.
5. Other items of importance.
- Know if your property, and your house, is located in the FEMA-designated Special Flood Hazard Area (SFHA), also known as the 1% annual chance floodplain or the 100-year floodplain.
 - Build responsibly by getting a permit before you start any projects at your home, including fill, grading, additions, decks, pools, etc., particularly if your property is located within the SFHA.
 - Protect the natural hazards of floodplains by reporting broken silt fences or other erosion control measures as they help keep our streams clean.

If you have any questions about the floodplain status of your property referenced in this letter, please feel free contact me at 816-969-1800.

Sincerely,

Kara M. Starlin, CFM
Environmental Specialist



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Flood Safety

OUTDOORS

Do not walk through flowing water. Drowning is the number-one cause of flood deaths. Currents can be deceptive; six inches of moving water can knock you off your feet. Use a pole or stick to ensure that the ground is still there before you go through an area where the water is not flowing.

Do not drive through a flooded area. More people drown in their cars than anywhere else. Don't drive around road barriers; the road or bridge may be washed out. A car can float in as little as two feet of water.

Stay away from power lines and electrical wires. The number two flood killer after drowning is electrocution. Electrical current can travel through water.

INDOORS

Turn off your electricity if your building is flooded. If you don't feel safe doing this, call an electrician. Some appliances, such as television sets, can shock you even after they have been unplugged. Don't use appliances or motors that have gotten wet unless they have been taken apart, cleaned, dried and inspected by a professional.

Watch for animals. Small animals like rats and snakes that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn items over and scare away small animals.

Look before you step. After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery.

Be alert for gas leaks. Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns, or open flames unless you know the gas has been turned off and the area has been thoroughly aired out. If you have questions on gas, call Kansas Gas Service at (913) 599-8998.

Carbon monoxide exhaust kills. Use a generator or other gasoline-powered machine outdoors. The same goes for camping stoves. Fumes from charcoal are especially deadly — cook with charcoal outdoors.

Clean everything that got wet. Flood waters have picked up sewage and chemicals from roads, farms, factories, and storage buildings. Spoiled food and flooded cosmetics and medicines are health hazards. **When in doubt, throw them out.**



LEE'S SUMMIT MISSOURI

August XX, 20XX

Resident and/or Property Owner
Address
Lee's Summit, MO XX

RE: Repetitive Loss Property, Annual Letter

Dear Resident or Property Owner:

You have received this letter because your property, listed above, is located in an area(s) that has flooded in the past as a result of flash flooding from localized rain event(s). This letter is also sent as a requirement of the City's participation in the National Flood Insurance Program (NFIP) Community Rating System (CRS) program. The City is a Class 9 CRS Community; therefore, Lee's Summit property owners will receive a 5% discount on flood insurance premiums.

Because your property is located in an area prone to flooding, the City wants to advise you of some things you can do to protect yourself and your home from flood damage:

1. Prepare for flooding by:
 - Knowing the flood safety guidance attached to this letter.
 - Knowing how to shut off the electricity and gas to your house.
 - Making a list of emergency numbers and identifying a safe place to go.
 - Making a household inventory, especially of basement contents.
 - Putting insurance policies, valuable papers, medicine, etc. in a safe place.
 - Putting cleaning supplies, camera, waterproof boots, etc. in a handy place.
 - Developing a disaster response plan – See the Red Cross website for a copy of the brochure "Your Family Disaster Plan" at:
<http://www.redcross.org/prepare/location/home-family/plan>
 - Getting a copy of the "Repairing Your Flooded Home" brochure from the Red Cross website.



2. Consider these permanent flood protection measures:

- Mark your fuse or breaker box to show the circuits in any floodable areas. Turning off the power to such areas can reduce property damage and save lives.
- If the lowest level of the house is below the Base Flood Elevation (BFE), consider elevating the house above that level.
- Check your house for water entry points. These can be basement windows, the basement stairwell, doors, and dryer vents. These points can be protected with low walls or temporary shields.
- Install a floor drain plug, standpipe, overhead sewer, or sewer backup valve to prevent sewer backup flooding.
- More information can be found in the "Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding" at:
<http://www.madcad.com/media/fema/fema-L235-2009.pdf>
- Note that some flood protection measures may need a building permit and others may not be safe for your type of building, so be sure to talk to the City's Development Services Department at 816-969-1200 if you have questions about making improvements to your home or property.

3. Contact the City for information on financial assistance.

- FEMA has several financial assistance programs that may be available to communities for flood loss prevention that allow for structure elevation above the flood level or property acquisition including: Flood Mitigation Assistance (FMA), a Hazard Mitigation Grant Program (HMGP), and a Pre-Disaster Mitigation Program (PDM). If you are interested in learning more about whether your property may be eligible for financial assistance through such a program, please contact the City's Emergency Manager in the Fire Department.

4. Get a flood insurance policy.

- Homeowner's and renters insurance policies do not cover damage from floods; however, because the City participates in the NFIP, you can purchase a separate flood insurance policy. Flood insurance policies are backed by the Federal government and are available to everyone located within City limits, even properties that have never flooded. Because the City is a Class 9 CRS Community, Lee's Summit property owners will receive a 5% discount on flood insurance premiums. Your property does not have to be located in a floodplain to obtain flood insurance. Because the house on your property does not appear to be mapped in a Special Flood Hazard Area (SFHA), also known as the 1% annual chance floodplain or the 100-year floodplain, you may qualify for a lower cost Preferred Risk policy.



- Some residents have purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Usually these policies just cover the structure and not the contents. However, many times the damage to the furniture and contents exceeds that of the structure. It is recommended that you consider purchasing coverage on building contents in addition to coverage of the structure.
 - In most cases, there is a 30-day waiting period before NFIP flood insurance coverage takes effect so it is recommended that flood insurance be purchased independently of an impending flood event.
 - Contact your insurance agent for more information on rates and coverage.
5. Other items of importance.
- Know if your property, and your building, is located in the FEMA-designated SFHA.
 - Build responsibly by getting a permit before you start any projects at your home, including fill, grading, additions, decks, pools, etc., particularly if your property is located within the SFHA.
 - Protect the natural hazards of floodplains by reporting broken silt fences or other erosion control measures as they help keep our streams clean.

If you have any questions about the floodplain status of your property referenced in this letter, please feel free contact me at 816-969-1800.

Sincerely,

Kara M. Starlin, CFM
Environmental Specialist



Public Works Engineering Division
220 SE Green Street | Lee's Summit, MO 64003 | P: 816.969.1800 | F: 816.969.1809 | lw@lw.net

Flood Safety

OUTDOORS

Do not walk through flowing water. Drowning is the number-one cause of flood deaths. Currents can be deceptive; six inches of moving water can knock you off your feet. Use a pole or stick to ensure that the ground is still there before you go through an area where the water is not flowing.

Do not drive through a flooded area. More people drown in their cars than anywhere else. Don't drive around road barriers; the road or bridge may be washed out. A car can float in as little as two feet of water.

Stay away from power lines and electrical wires. The number two flood killer after drowning is electrocution. Electrical current can travel through water.

INDOORS

Turn off your electricity if your building is flooded. If you don't feel safe doing this, call an electrician. Some appliances, such as television sets, can shock you even after they have been unplugged. Don't use appliances or motors that have gotten wet unless they have been taken apart, cleaned, dried and inspected by a professional.

Watch for animals. Small animals like rats and snakes that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke and turn items over and scare away small animals.

Look before you step. After a flood, the ground and floors are covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be very slippery.

Be alert for gas leaks. Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns, or open flames unless you know the gas has been turned off and the area has been thoroughly aired out. If you have questions on gas, call Kansas Gas Service at (913) 599-8998.

Carbon monoxide exhaust kills. Use a generator or other gasoline-powered machine outdoors. The same goes for camping stoves. Fumes from charcoal are especially deadly — cook with charcoal outdoors.

Clean everything that got wet. Flood waters have picked up sewage and chemicals from roads, farms, factories, and storage buildings. Spoiled food and flooded cosmetics and medicines are health hazards. **When in doubt, throw them out.**



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LEE'S SUMMIT MISSOURI

April XX, 20XX

Resident and/or Property Owner

Address

Lee's Summit, MO XX

RE: Potential Flood Risk Property
Annual, General Information Letter

Dear Resident and/or Property Owner:

You have received this letter because your property, listed above, is located near an area that is prone to flash flooding. The City, in partnership with the Federal Emergency Management Agency (FEMA), wants to advise you of some things you can do to protect yourself and your home from potential flood damage, if you so choose:

1. Prepare for a flood by:
 - Knowing general flood safety guidance attached to this letter.
 - Knowing how to shut off the electricity and gas to your house.
 - Making a list of emergency numbers and identifying a safe place to go.
 - Making a household inventory, especially of basement contents.
 - Putting insurance policies, valuable papers, medicine, etc. in a safe place.
 - Putting cleaning supplies, camera, waterproof boots, etc. in a handy place.
 - Developing a disaster response plan – See the Red Cross website for a copy of the brochure "Your Family Disaster Plan" at:
<http://www.redcross.org/prepare/location/home-family-plan>
 - Getting a copy of the "Repairing Your Flooded Home" brochure from the Red Cross website.
2. Consider these permanent flood protection measures:
 - Mark your fuse or breaker box to show the circuits in any floodable areas. Turning off the power to such area can reduce property damage and save lives.
 - If the lowest floor of the house is below the Base Flood Elevation (BFE), consider elevating the house above that level.



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- Check your home for water entry points. These can be basement windows, the basement stairwell, doors, and dryer vents. These points can be protected with low walls or temporary shields.
- Install a floor drain plug, standpipe, overhead sewer, or sewer backup valve to prevent sewer backup flooding.
- More information can be found in the "Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding" at:
<http://www.madcad.com/media/fema/FEMA-1235-2009.pdf>
- Note that some flood protection measures may need a building permit and others may not be safe for your type of building, so be sure to talk to the City's Development Services Department at 816-969-1200 if you have questions about making improvements to your home or property.

3. Contact the City for information on financial assistance.

- FEMA has several financial assistance programs that may be available to communities for flood loss prevention that allow for structure elevation above the flood level or property acquisition including: Flood Mitigation Assistance (FMA), a Hazard Mitigation Grant Program (HMGP), and a Pre-Disaster Mitigation Program (PDM). If you are interested in learning more about whether your property may be eligible for financial assistance through such a program, please contact the City's Emergency Manager in the Fire Department.

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Sincerely,



Kara M. Starlin, CFM
Environmental Specialist



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Flood Safety

OUTDOORS

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