



Together, Investing in Municipal Excellence

CITY COUNCIL MEETING AGENDA
SEPTEMBER 8, 2025

723 S. Lewis Street, Room 1122 B
Stillwater, OK 74074
5:30 PM

Mayor Will Joyce, Vice Mayor Amy Dzialowski, Councilors Kevin Clark, Christie Hawkins,
& Tim Hardin

1. Call Meeting to Order
2. Pledge of Allegiance
3. Consent Docket

Items listed on the consent docket are routine administrative matters that may be approved without discussion. The Council will take action on these items collectively with a single vote. The requested City Council action is indicated for each item listed. Should a Councilor elect to discuss, amend, revise, or table any item listed on the consent docket, the item will be moved to the section of the agenda titled "Items Removed from the Consent Docket" for consideration and possible action. Additionally, a Councilor or the City Manager may simply ask the Mayor to remove an item from the consent docket prior to action by the City Council and no action will be taken on the removed item at this meeting.

a.	Approve August 18, 2025 regular meeting minutes	
b.	Approve budget amendment carrying forward balance of Purchase Orders from FY25 to FY26 for: • Stormwater Master Plan contract • Replacement of a heat pump at the Library	Christy Cluck
c.	Approve a budget amendment to accept the donation from Payne County Stockyards LLC in the amount of \$466 to be used by the Stillwater Fire Department.	Jared Thulin
d.	Approve Park Valley Land Fund, LLC, FINAL PLAT (SUB25-11), for Park Valley Addition, Section 3 on a portion of property addressed as 1823 W. 26th Avenue in the Small Lot Single-Family Residential	CC-25-120 Henry Bibelheimer

	(RSS) district.		
e.	Approve three (3) amendments (Amendments 006G, 006H, 006I) to the McFarland Architects Professional Services Agreement for Stillwater Regional Airport Terminal Improvement Program for architecture and engineering services in support of the Passenger Boarding Bridge, Furniture, Fixtures and Equipment, and Baggage Handling System in the amount of \$156,335 and authorize City Manager to sign the contract amendments.	CC-25-121	Kellie Reed
f.	Approve Amendment 006J to the McFarland Architects Professional Services Agreement for Stillwater Regional Airport Terminal Improvement Program for continued terminal Phase 1 support in the amount of \$177,635, approve associated budget amendments and authorize City Manager to sign the contract amendments.	CC-25-122	Kellie Reed
g.	Acceptance of Water, Sewer, Storm Sewer and Paving public improvements (IMP23-07) for Park Valley Addition, Section 3, SE corner of 26th and Western.	CC-25-123	Joshua Brown
h.	Acceptance of a Waterline Easement at 707 E. Airport Road.	CC-25-124	Henry Bibelheimer
i.	Approve Encroachment Agreement and Release of Liability with The Tonkawa Tribe of Oklahoma for encroaching into easements at property addressed as 707 E. Airport Road.	CC-25-125	Henry Bibelheimer
j.	Acceptance of Sanitary Sewer Easement from Riggins Ventures, LLC at 230 N. Hoke Street.	CC-25-126	Joshua Brown
k.	Approve budget amendments returning project funds to the Transportation Sales Tax Fund and the Stormwater Fund.	CC-25-127	Bill Millis
l.	Award of a Unit Price Contract to MK Excavation, LLC for \$373,791.75 related to Miscellaneous Deferred Maintenance Improvements (Bid No.	CC-25-128	Bill Millis

	28-2025); authorize total construction expenditures of \$463,786, which includes construction contract, construction administrative services, testing, and contingency; approve budget amendments in the amount of \$378,211 from the Transportation Sales Tax Fund; approve budget amendment in the amount of \$85,575 from the Stormwater Fund; authorize the City Manager to execute the Contract and related documents.		
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4. Public Comment on Items not Scheduled for Public Hearings

Stillwater City Code, Section 2-53(a) & (b), provides that taxpayers or residents of the city, or their authorized legal representatives, may address the Council at a regularly scheduled meeting on **any item of business listed on the meeting agenda** provided they have submitted a written request prior to the meeting either online at Request to speak form or via the form found in the lobby outside Council chambers.

5. Items Removed from the Consent Docket

Items removed from the consent docket are placed on this section of the agenda for discussion, revision, amendment and/or tabling prior to action by the City Council. The City Council may take action, including a vote or series of votes, on items removed to this section of the agenda after the requested discussion, revision or amendment.

6. Public Hearings

The Council will hear public comments, discuss, and take action including a vote or series of votes on each item listed as presented or as amended by the City Council unless the agenda entry specifically states that no action will be taken.

a.	Receive public comment regarding a request for a Map Amendment (MA25-04) to rezone property addressed as 320 S. Walnut Street from Small Lot Single-Family Residential (RSS) to Two-Family Residential (RT).	CC-25-129	Henry Bibelheimer
b.	Receive public comment regarding a request for a Specific Use Permit (SUP25-03) for property addressed as 320 S. Walnut Street to allow townhomes in the Two-Family Residential (RT) district.	CC-25-130	Henry Bibelheimer

7. General Orders

The City Council will hear a staff presentation, discuss, and take action including a vote or series of votes on each item listed as presented or as amended or revised by the City Council unless the agenda entry specifically states that no action will be taken. The requested action is indicated in each agenda entry but may be amended or revised prior to action by the City Council.

a.	Lake McMurtry Friends Annual Presentation	Jermie Fansler
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b.	Consider approval of a contract with Found Design LLC doing business as MERJE in the amount of \$31,285, for professional design and planning for branding.	CC-25-131	Dawn Dodson
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8. Resolutions

The City Council will hear a staff presentation, discuss, and take action including a vote or series of votes on each resolution listed as presented or as amended or revised by the City Council.

a.	RESOLUTION NO. CC-2025-23: A RESOLUTION ADOPTING THE 2025 CITY OF STILLWATER HAZARD MITIGATION PLAN
b.	RESOLUTION NO. CC-2025-24: A RESOLUTION ADOPTING A REVISED RATE SCHEDULE FOR SOLID WASTE COLLECTION SERVICES; PROVIDING FOR SUBSEQUENT RATE INCREASES; AND PROVIDING EFFECTIVE DATES

9. Ordinances

The City Council will hear a staff presentation, discuss, and take action including a vote or series of votes on each ordinance listed as presented or as amended or revised by the City Council.

First Read

a.	ORDINANCE. NO. 3576: AN ORDINANCE TO REZONE PROPERTY ADDRESSED AS 320 S. WALNUT STREET FROM SMALL LOT SINGLE-FAMILY RESIDENTIAL (RSS) TO TWO-FAMILY RESIDENTIAL (RT).
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Second Read

a.	ORDINANCE NO. 3578: AN ORDINANCE REZONING A TRACT OF LAND LOCATED AT 624 W. 22ND AVENUE FROM SMALL LOT SINGLE-FAMILY RESIDENTIAL (RSS) and AGRICULTURE (A) TO AGRICULTURE (A).
b.	ORDINANCE NO. 3579: AN ORDINANCE CLOSING A PORTION OF A GENERAL UTILITY EASEMENT LOCATED AT 707 E. AIRPORT ROAD.

10. Reports from Officers and Boards

Announcements and remarks of general interest may be made by Councilors, City Manager or City Attorney. Items of City business that may require discussion or action including a vote or series of votes are listed below.

a.	Miscellaneous items from the City Attorney
b.	Miscellaneous items from the City Manager
c.	Miscellaneous items from the City Council

11. Questions and Inquiries

12. Adjourn

On September 4, 2025 at 11:30 a.m., a true and correct copy of this agenda was posted on the kiosk outside City Hall, 723 S. Lewis Street, Stillwater, OK.

The City of Stillwater encourages participation from all citizens. If participation at any public meeting is not possible due to a disability, please notify the City Manager's office at least 48 hours prior to the meeting by calling 405.742.8243.

- Meetings are televised on AT&T U-verse channel 99 and Optimum channel 14.
- Find meeting agendas and minutes online at [Agendas and Minutes](#)
- Official minutes are archived in the City Clerk's office.

**IN ACCORDANCE WITH THE OKLAHOMA OPEN MEETING LAW
THE AGENDA WAS POSTED AUGUST 14, 2025 AT 4:50 P.M.
AT THE MUNICIPAL BUILDING, 723 SOUTH LEWIS, STILLWATER, OKLAHOMA**

**MINUTES
STILLWATER CITY COUNCIL
REGULAR MEETING
COUNCIL HEARING ROOM
723 S. LEWIS
AUGUST 18, 2025**

PRESENT: MAYOR WILLIAM H. JOYCE, VICE MAYOR AMY DZIALOWSKI,
COUNCILORS CHRISTIE HAWKINS, KEVIN CLARK AND TIM HARDIN
ABSENT: NONE

1. CALL MEETING TO ORDER

Mayor Joyce called the meeting to order at 5:30 p.m.

2. PLEDGE OF ALLEGIANCE

The Stillwater City Council led the audience in the Pledge of Allegiance.

3. CONSENT DOCKET

- a. Approve August 4, 2025 regular meeting minutes.
- b. Approve budget amendment to reflect the annual disbursement of \$20,000 from the Stillwater Community Center Foundation for Block 34 maintenance pursuant to the Amended and Restated Donation Agreement for Programming and Operations of Block 34 Live Music Program.
- c. Approve budget amendments to reflect the increase in cleaning fees charged to Project HEART per executed contract.
- d. Approve budget amendments for award of AIG grant #3-40-0090-045-2025 for construction of terminal building (furniture and directional signage) and reconstruction of rotating beacon.
- e. Approve budget amendments for award of AIP grant #3-40-0090-046-2025 for construction of terminal building (baggage handling system).
- f. Approve budget amendments for award of AIP grant #3-40-0090-047-2025 for construction of terminal building (passenger boarding bridge).
- g. Acceptance of an electric easement for primary extension feed to new residential structure at 1417 N. Hightower Street.
- h. Acceptance of an electric easement for primary extension feed to new residential structure at 1417 N. Hightower Street.
- i. Acceptance of an off-site water line to service a new subdivision called Fern Street Cottages.
- j. Acceptance of general utility easements for 1401, 1405, 1411, and 1417 N. Hightower Street.

MOTION BY VICE MAYOR DZIALOWSKI, SECOND BY COUNCILOR CLARK TO APPROVE THE CONSENT DOCKET AS PRESENTED.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA.
NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

4. PUBLIC COMMENT ON AGENDA ITEMS NOT SCHEDULED FOR PUBLIC HEARING

There were no requests to speak on agenda items not scheduled for public hearing.

5. ITEMS REMOVED FROM CONSENT DOCKET

None.

6. PUBLIC HEARINGS

- a. Receive public comment regarding a request for a Map Amendment (MA25-05) to rezone from Small Lot Single-Family Residential (RSS) and Agriculture (A) to Agriculture (A) property addressed as 624 W. 22nd Avenue.

Senior Planner Henry Bibelheimer reported that the property is currently vacant and used for agricultural purposes. The tract currently has split zoning with the frontage along 22nd Avenue being zoned Small Lot Single-Family Residential (RSS) and the remainder of the tract being zoned Agriculture (A). The applicant is requesting rezoning the entire property to A to allow for the construction of a new barn with the possibility of adding a residential dwelling in the future.

Mayor Joyce opened and closed the public hearing as no one was present to speak.

Planning Commission recommended approval with 4-0 vote.

MOTION BY COUNCILOR HARDIN, SECOND BY COUNCILOR HAWKINS TO ACCEPT THE PLANNING COMMISSION'S RECOMMENDATION TO APPROVE THE MAP AMENDMENT ADDRESSED AS 624 WEST 22ND AVENUE.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

- b. Receive public comment for closing of a portion of a utility easement at property located at 707 E. Airport Road.

Senior Planner Henry Bibelheimer reported that the Tonkawa Tribe of Oklahoma requests the closure of the north 227.5 feet of a 30-foot-wide utility easement located on property addressed as 707 E. Airport Road. This is the location of The Hub II Entertainment Center currently under construction. The easement area to be closed splits the property and contains a public water main that will remain in service. Mr. Bibelheimer stated that the entrance canopy of The Hub II will overhang the easement area and existing waterline. The developer is proposing to grant a 20-foot waterline easement over the existing waterline and an encroachment agreement for the portion of the building that will overhang the easement and waterline. Acceptance of the new easement and encroachment agreement will be considered at a future council meeting.

Councilor Hawkins asked for clarification on the order of the approval of the easements and encroachment agreement. Development Services Director David Barth addressed this issue and answered Council's questions.

Councilor Clark questioned why all easements and agreements were not on the agenda tonight. Mr. Barth explained the process of approving these documents and answered additional questions.

Mayor Joyce opened and closed the public hearing as no one was present to speak.

MOTION BY COUNCILOR CLARK, SECOND BY COUNCILOR HARDIN TO ACCEPT STAFF'S RECOMMENDATION TO CLOSE THE NORTH 227.5 FEET OF THE 30-FOOT-WIDE UTILITY EASEMENT MORE PARTICULARLY DESCRIBED IN BOOK 2491, PAGE 602.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

7. GENERAL ORDERS

- a. BerryDunn update presentation on Enterprise Resource Planning (ERP) Project.

Information Technology Director Brad Stewart reported that in January 2025, Council approved retaining BerryDunn to help assess the City's current software systems and identify future business software needs. Mr. Stewart introduced Ryan Doil with BerryDunn.

Mr. Doil gave a brief history of BerryDunn and how their process works. He stated that the focus of this project is to identify, define and evaluate the current environment, as well as conduct future state planning for the City's enterprise software systems which include Enterprise Resource Planning, Utility Billing and Customer Information System, Community Development and Enterprise Asset Management. Mr. Doil presented the project overview and scope with the City's goals and objectives. He discussed the work performed and the recommended action. Mr. Doil stated this project would be implemented in phases and he discussed the next steps in this process. He answered Council's questions.

No action was taken on this item.

- b. Transportation Projects update and presentation, discussion, and possible action to approve the FY26 Pavement Management Plan.

Engineering Director Bill Millis stated he was going to give an update on transportation projects and then present the FY26 Pavement Management Program (PMP). He presented and discussed the major transportation projects that have been completed as well as the transportation projects that are under construction. Mr. Millis stated that this is more of a program than a project, but staff and the Transportation Advisory Committee (TPAC) have heard from customers that want the focus to be on trails and sidewalks. There is an app on the City's website called Sidewalk Connect and citizens can submit areas where sidewalks and repairs are needed. Engineering staff and Public Works review these requests and place them on a priority list. City Manager Brady Moore reported that Public Works can handle the small sidewalk connections or repairs.

Mr. Millis gave an update on the FY21-FY25 Pavement Management Program. He presented the status of the projects in FY21-FY25 PMP from completed, under construction, and not completed. He discussed the supplemental priorities that did not make the PMP but over the five years because of failing infrastructure or change in priorities, have now moved to the top of the list. Mr. Millis presented a chart showing the Total Expenditure of Transportation Sales Tax through FY25. Assistant City Manager and Finance Director Christy Cluck answered Council's questions regarding this expenditure chart. City Manager Brady Moore reported that TPAC is very appreciative of how staff has worked on completing old projects on the list and TPAC also helps keep the current project list moving.

Mr. Millis presented an overview of the proposed FY26 PMP that was recommended by TPAC to present to Council for approval. Mr. Millis answered Council's questions.

MOTION BY COUNCILOR HARDIN, SECOND BY COUNCILOR HAWKINS TO APPROVE STAFF'S RECOMMENDATION TO APPROVE THE FY26 PAVEMENT MANAGEMENT PROGRAM AS PRESENTED.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

8. RESOLUTIONS

- a. Resolution No. CC-2025-21: A resolution of the City of Stillwater, Oklahoma (The “City”) approving action taken by The Stillwater Utilities Authority (The “Authority”) Authorizing Issuance, Sale And Delivery Of A Promissory Note Of The Authority To The Oklahoma Water Resources Board; Ratifying And Confirming An Amended Lease Agreement By And Between The City And The Authority Pertaining To Certain Water, Sanitary Sewer, Solid Waste Disposal, And Electric Systems; Ratifying And Confirming A Sales Tax Agreement By And Between The Authority And The City Pertaining To A Pledge Of Certain Sales Tax Revenues; And Containing Other Provisions Related Thereto.

City Attorney Kimberly Carnley reported that the City’s Bond Counsel and Municipal Financial Advisor are present to introduce this resolution and a couple of resolutions for consideration on the SUA agenda.

Chris Gander, BOK Financial Securities, discussed the bond process regarding the resolutions on the agendas and answered Council’s questions. Nate Ellis, The Public Law Group, was also present. Mr. Millis and Assistant City Manager and Finance Director Christy Cluck answered Council’s questions regarding the funding and grant opportunities for the Capital Water Projects.

MOTION BY COUNCILOR CLARK, SECOND BY COUNCILOR HAWKINS TO ADOPT RESOLUTION NO. CC-2025-21 AS PRESENTED.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

- b. Resolution No. CC-2025-22: A resolution of the Stillwater City Council Authorizing, Approving, And Ratifying the Grant Application for Fiscal Year 2025 Airport Improvement Program Discretionary Funds Administered by the Federal Aviation Administration for Airport Infrastructure Improvements at Stillwater Regional Airport as submitted on July 8, 2025.

City Attorney Kimberly Carnley reported that Council previously approved Resolution No. CC-2025-13 that authorized submission of an FAA Grant Application for improvements specifically for the Passenger Boarding Bridge. During the submission the Airport’s consultant realized that the numbers needed to be adjusted slightly so they would be correct on the grant that was submitted. Ms. Carnley stated that in order to ensure timely submission of the grant and to avoid any delay on the project a correct grant application was submitted. She stated that she recommends approval of this resolution as necessary to authorize, approve and ratify the grant application that was actually submitted.

MOTION BY VICE MAYOR DZIALOWSKI, SECOND BY COUNCILOR HAWKINS TO ADOPT RESOLUTION NO. CC-2025-22 AS PRESENTED.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

9. ORDINANCES

- a. First Reading

Ordinance No. 3578: An ordinance rezoning a tract of land located at 624 W. 22nd Avenue from Small Lot Single-Family Residential (RSS) and Agriculture (A) to Agriculture (A).

MOTION BY COUNCILOR CLARK, SECOND BY COUNCILOR HAWKINS TO ADVANCE ORDINANCE 3578 TO SECOND READ AS PRESENTED.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

Ordinance No. 3579: An ordinance closing a portion of a General Utility Easement located at 707 E. Airport Road.

MOTION BY COUNCILOR HAWKINS, SECOND BY VICE MAYOR DZIALOWSKI TO ADVANCE ORDINANCE 3579 TO SECOND READ AS PRESENTED.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

10. APPOINTMENTS

a. Audit Committee Appointment

MOTION BY MAYOR JOYCE, SECOND BY COUNCILOR CLARK TO APPOINT SKYLER RODENBERG TO A 1ST TERM ON THE AUDIT COMMITTEE.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

11. REPORTS FROM OFFICERS & BOARDS

- a. Miscellaneous items from the City Attorney: None.
- b. Miscellaneous items from the City Manager:
 - City Manager Brady Moore congratulated the Stillwater Animal Welfare staff and volunteers for achieving no-kill status with a 90% save rate in 2024. This milestone reflects a true culture of caring and compassion. It represents the dedication of staff, the commitment of volunteers, the support of our community, and the strength of partnerships with animal rescue and welfare networks.
- c. Miscellaneous items from the City Council:
 - Councilor Hardin announced that Block 34 is quickly becoming Stillwater's go-to spot for community fun. From concerts and yoga in the park to Roundnet tryouts (also known as Spikeball), and more, there's always something happening. And don't miss Market 34, your Saturday destination. Join us downtown for local vendors, handmade goods, food trucks, and live music all in one vibrant community space.
 - Councilor Hardin also reported that he attended the celebration at the Google Data Center in Pryor and he stated he was very surprised at the lack of noise from the Data Center.
 - Councilor Clark invited residents to join staff at the 2025 Payne County Fair, August 25-31. City staff from departments including Emergency Management, Fire, Waste Management, Communications, Public Works, Human Resources, Police, Engineering, and more will be in the Community Building throughout the week. They're excited to meet you, answer questions, share resources, and hear your ideas. Stop by the booth and let us know how we can serve you and our community.
 - Councilor Hawkins announced that Cowboy Football is almost here. Anyone looking for an easier way to park on gameday should check out the free Park & Ride shuttle service. The City of Stillwater, OSU Athletics, and Visit Stillwater

team up each season to make your experience simple and stress-free with free parking, shuttles, and a complete gameday guide. Shuttles run every 30 minutes, starting 3 hours before kickoff, pick-up & drop-off is at 7th Ave. and Lewis St. and full gameday details are at visitstillwater.org. Park with ease, grab a bite to eat or drink downtown, then head to the game ready to cheer, go Cowboys!

- Vice Mayor Dzialowski reminded residents that the deadline is almost here so submit your entry for the Utility Box Art Contest by Tuesday, September 2. This year's theme, "Stillwater Strong," celebrates the resilience, creativity, and spirit of our community. Enter online at stillwaterart.org or drop off your artwork at the Stillwater Community Center.
 - Vice Mayor Dzialowski gave an update on FEMA and SBA assistance for the March wildfires and stated that help is still available through Catholic Charities.
 - Mayor Joyce congratulated the City of Stillwater Finance Department for earning the nation's highest honor in governmental accounting and financial reporting for the 43rd year in a row. This prestigious award from the Government Finance Officers Association reflects our Finance team's exceptional professionalism and dedication to transparency. It demonstrates the City's long-standing commitment to being responsible stewards of taxpayer dollars and maintaining the community's trust. We are proud of our Finance Department for continuing this remarkable legacy of excellence.
- i. Discussion about scheduling items for future meetings.

12. QUESTIONS & INQUIRIES

None.

13. ADJOURN

MOTION BY COUNCILOR CLARK, SECOND BY VICE MAYOR DZIALOWSKI TO ADJOURN THE AUGUST 18, 2025 REGULAR MEETING OF THE STILLWATER CITY COUNCIL.

ROLL CALL VOTE: JOYCE-YEA, DZIALOWSKI-YEA, HAWKINS-YEA, CLARK-YEA, HARDIN-YEA. NAY-NONE. MOTION CARRIED WITH FIVE YEA VOTES.

The August 18, 2025 regular meeting of the Stillwater City Council adjourned at 6:58 p.m.

WILLIAM H. JOYCE, MAYOR
STILLWATER CITY COUNCIL

TERESA KADAVY
CITY CLERK

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 08/20/2025

Department: Finance

Requested by: Christy Cluck

Explanation:

Expenditure:

Carry forward balance of Purchase Orders from FY25 to FY26 for a Stormwater Master Plan contract and replacement of a heat pump at the Library. Projects erroneously omitted from carry forward report to Council on 7/7/2025.

	Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	Stormwater Master Plan	2104011 - 53069		\$ 0	\$ 54,634	\$ 54,634
	Library Heat Pump Replacement	1015510 - 53023		\$ 0	\$ 12,506	\$ 12,506
		-				\$ 0
		-				\$ 0
		-				\$ 0
Decrease:		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 67,140

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: Christy Cluck

Date: 8-20-25

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

--Print on Yellow Paper--

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 08/26/2025

Department: Fire

Requested by: Jared Thulin

Explanation:

Revenues:
Increase revenue projections for the receipt of a donation from Payne County Stockyards LLC.

Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase: Donations	1016510 - 48701	26FD01101	\$ 0	\$ 466	\$ 466
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
Decrease:	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 466

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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[Click Here to Print](#)

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 08/26/2025

Department: Fire

Requested by: Jared Thulin

Explanation:

Expenditures:
Appropriate funds from donation received from Payne County Stockyards LLC.

	Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	Donations	1016510 - 53041	26FD01101	\$ 0	\$ 466	\$ 466
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
Decrease:		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 466

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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[Click Here to Clear Form](#)

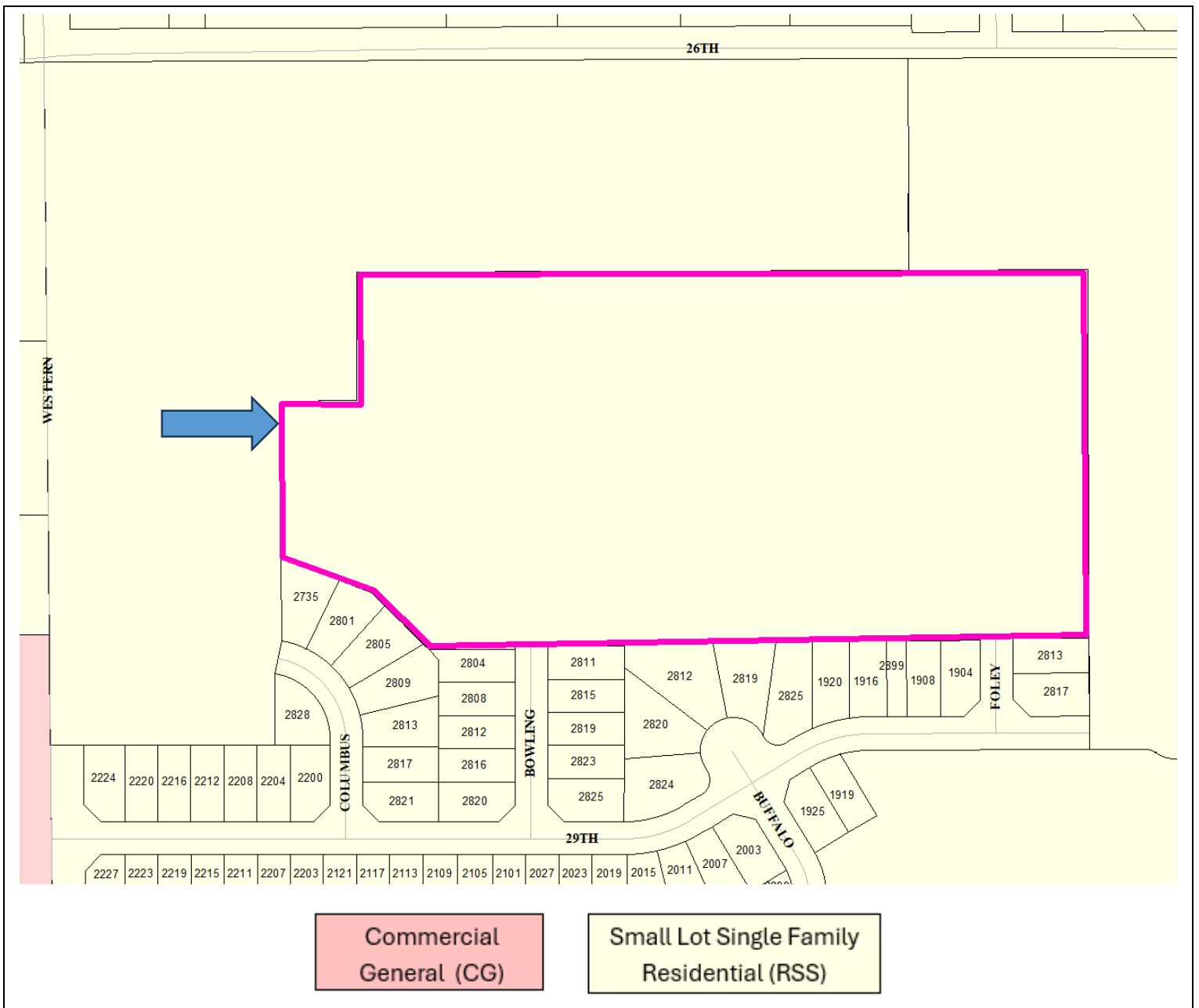
[Click Here to Print](#)

REPORT TO: CITY COUNCIL**MEETING DATE: SEPTEMBER 8, 2025**

Agenda Item:	3.d. CC-25-120
Previous/Related Action:	
Background/Issue:	• Park Valley Land Fund, LLC. owns property located on the southeast corner of S. Western Road and W. 26th Avenue. • The applicant requests review and approval of a final plat, known as Park Valley Addition, Section 3, to subdivide 14.85 acres into 77 single family lots and three (3) outlots. • The Final Plat for Park Valley Addition, Section 1 was approved by City Council on September 11th, 2023, which subdivided 18.50 acres into 58 lots and three (3) outlots. • The final plat for Park Valley Addition, Section 2 is currently on hold while improvements are being constructed.
Proposal/Solution:	On August 5 th , 2025 Planning Commission voted unanimously to recommend approval of the Final Plat for Park Valley Section 3 as presented.
Financial Source/Impact:	There is no additional financial impact from the acceptance of this plat.
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	Motion to accept the final plat for Park Valley Sec. 3.
Prepared By:	Henry Bibelheimer, Senior Planner
Reviewed By:	David Barth Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Area Map
2. Park Valley Addition, Sec. 3 Final Plat



Stillwater. OKLAHOMA
stillwaterok.gov

Project Type: Final Plat (SUB25-11)
Request: Park Valley Section 3 Final Plat
Address: 1823 W 26TH AVE

FINAL PLAT
PARK VALLEY ADDITION SECTION 3
A PART OF THE S.W. 1/4, SECTION 27, T19N, R2E, I.M.
STILLWATER, PAYNE COUNTY, OKLAHOMA

COUNTY TREASURER'S CERTIFICATE

I, Carla Manning, hereby certify that I am the duly elected and acting County Treasurer of Payne County, State of Oklahoma, that the tax records of said County show all taxes paid for the year 20____ and all prior years on the land shown on the annexed plat of PARK VALLEY ADDITION SECTION 3, an addition to the City of Stillwater, Payne County, Oklahoma that the required statutory security has been deposited in the office of the County Treasurer, guaranteeing payment of current years taxes. IN WITNESS WHEREOF, said County Treasurer has caused this instrument to be executed at Stillwater, Oklahoma on this _____ day of _____, 20____.

COUNTY TREASURER, Carla Manning

LICENSED LAND SURVEYOR

I, Troy Dee, do hereby certify that I am a Professional Land Surveyor in the State of Oklahoma, and that the Final Plat of PARK VALLEY ADDITION SECTION 3, an addition to the City of Stillwater, Oklahoma, consisting of two (2) sheets, represents a survey made under my supervision on the _____ day of _____, 20____ and that monuments shown thereon actually exist and their positions are correctly shown, that this Survey meets the Oklahoma Minimum Standards for the Practice of Land Surveyors as adopted by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors; and that said Final Plat complies with the requirements of Title 11 SECTION 61-108 of the Oklahoma State Statutes.

GOLDEN LAND SURVEYING, P.L.L.C.
4131 NW 122nd Street, Suite 100
Oklahoma City, OK. 73120
PHONE: (405) 849-6010

Troy Dee, LICENSED PROFESSIONAL LAND SURVEYOR No. 1745
OKLAHOMA CERTIFICATE OF AUTHORIZATION NO. 7263 EXPIRES June 30, 2025

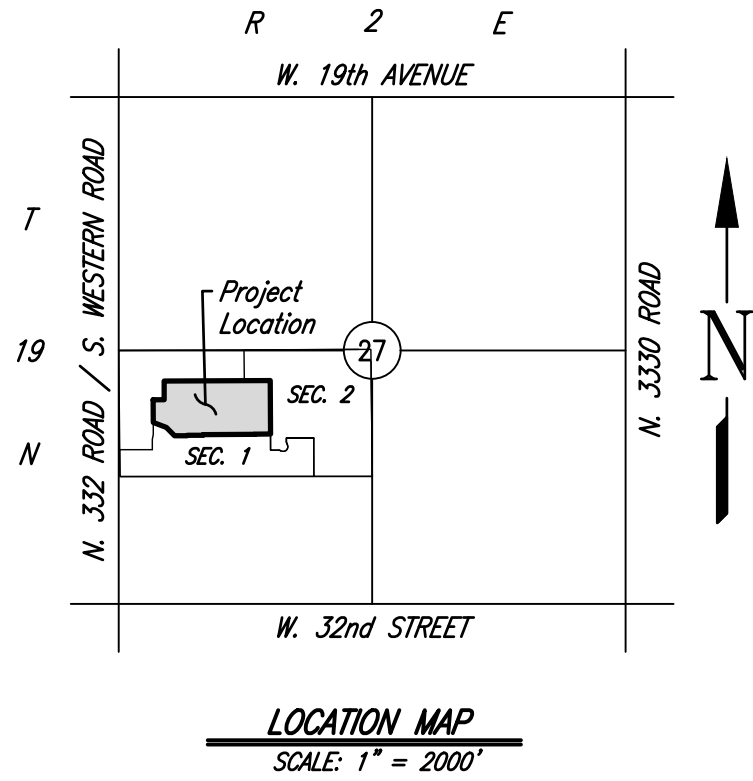
STATE OF OKLAHOMA s.s.
COUNTY OF OKLAHOMA

Before me, the undersigned, a Notary Public in and for said County and State on this _____ day, of _____, 20____, personally appeared Troy Dee to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.

My Commission Expires: _____

NOTARY PUBLIC



OWNER'S CERTIFICATE AND DEDICATION
KNOW ALL MEN BY THESE PRESENTS:

That we the undersigned, IH DEVELOPMENT, L.L.C., an Oklahoma Limited Liability Company and IDEAL HOMES of NORMAN, L.P., an Oklahoma Limited Partnership, do hereby certify that we are the owners of and the only person or persons, corporation or corporations having any right, title or interest in the land shown on the annexed plat of PARK VALLEY ADDITION SECTION 3 a subdivision of a part of the S.W. 1/4, Section 27, T19N, R2E, I.M., of the Indian Meridian to Stillwater, Payne County, Oklahoma, and have caused the said premises to be surveyed and platted into lots, blocks, streets and easements as shown on said annexed plat, said annexed plat represents a correct survey of all property included therein and is hereby adopted as the plat of land under the name of PARK VALLEY ADDITION SECTION 1. IH DEVELOPMENT, L.L.C. and IDEAL HOMES of NORMAN, L.P., dedicates all streets and easements shown on said annexed plat to the public for public highways, streets and easements, for themselves, their successors and assigns forever and have caused the same to be released from all rights, easements and encumbrances except as shown on the Bonded Abstracter's Certificate.

In Witness Whereof the undersigned have caused this instrument to be executed this _____ day of _____, 20____.

IH DEVELOPMENT, L.L.C.
an Oklahoma Limited Liability Company

IDEAL HOMES of NORMAN, L.P.,
an Oklahoma Limited Partnership

Member

General Partner

STATE OF OKLAHOMA s.s.
COUNTY OF PAYNE

Before me, the undersigned, a Notary Public in and for said County and State, on this _____ day of _____, 20____ personally appeared _____ as Member of IH DEVELOPMENT, L.L.C., _____ as General Partner of IDEAL HOMES of NORMAN, L.P., to me known to be the identical persons who executed the within and foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed and as the free and voluntary act and deed of IH DEVELOPMENT, L.L.C., and IDEAL HOMES of NORMAN, for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.

My Commission Expires: _____

NOTARY PUBLIC

CERTIFICATE OF APPROVAL

I, _____, Chairman of the Planning Commission of the City of Stillwater, Oklahoma, hereby certify that the said Planning Commission approved the final plat of PARK VALLEY ADDITION SECTION 3, Stillwater, Oklahoma, this _____ day of _____, 20____.

CHAIRMAN,

ACCEPTANCE OF DEDICATIONS

Be it resolved by the City Council of the City of Stillwater, Oklahoma that the dedications shown on the annexed plat of PARK VALLEY ADDITION SECTION 3, Stillwater, Oklahoma are hereby accepted.

Signed by the Mayor of the City of Stillwater, Oklahoma this _____ day of _____, 20____.

ATTEST: _____

CITY CLERK,

MAYOR,

SUB25-11

RECEIVED
By CGibson at 9:45 am, Jul 09, 2025

Date: July 8, 2025
SMC Consulting Engineers, P.C.
815 W. Main Street
Oklahoma City, OK 73106
Ph.: (405) 232-7715
Oklahoma CA #464 Exp. 6/30/2027

PARK VALLEY ADDITION SECTION 3
FINAL PLAT
SHEET 1 OF 2

FINAL PLAT
PARK VALLEY ADDITION SECTION 3
A PART OF THE S.W. 1/4, SECTION 27, T19N, R2E, I.M.
STILLWATER, PAYNE COUNTY, OKLAHOMA

P.O.C.
N.E. COR., S.W. ¼,
SEC. 27, T9N, R2E, I.M.

SCALE: 1" = 60'
TOTAL LOTS = 77

- NOTES:
1. SET 1/2" IRON PINS WITH CA #7263 AT ALL PROPERTY CORNERS.
 2. TYPE OF CENTERLINE MONUMENTS SHALL BE AS FOLLOWS: MAG NAILS WITH SHINER FOR ASPHALT AND A CUT "X" FOR CONCRETE.
 3. EASEMENTS SHOWN HEREON BY SPECIFIC RECORDING INFORMATION, OR LYING OUTSIDE THE LIMITS OF THE AREA BEING PLATED ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE NOT DEDICATED PURSUANT TO THIS FINAL PLAT.
 4. THE UNIT OF MEASUREMENT SHOWN FOR ALL DIMENSIONS ON THE FINAL PLAT IS FEET.
 5. THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (NORTH ZONE) WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.
 6. COMMON AREA WILL BE OWNED AND MAINTAINED BY MANDATORY HOME OWNERS ASSOCIATION.

LEGAL DESCRIPTION:

A tract of land being a part of the Southwest Quarter (S.W. ¼), Section Twenty-Seven (27), Township Nineteen North (T19N), Range Two East (R2E), of the Indian Meridian, Stillwater, Payne County, Oklahoma, being more particularly described as follows:

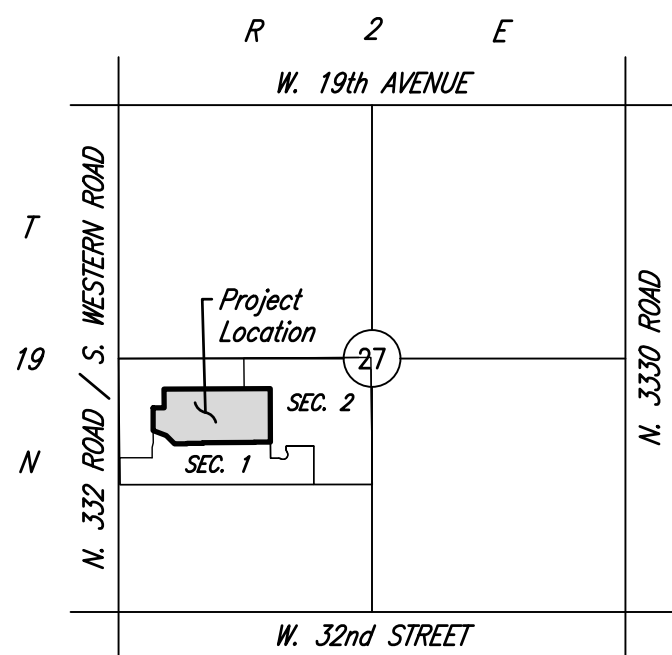
COMMENCING at the Northeast corner of said S.W. ¼, THENCE South 89°45'26" West along the north line of said S.W. ¼ a distance of 1322.91 feet; THENCE South 00°39'46" East a distance of 320.01 feet to the POINT OF BEGINNING;

THENCE North 89°45'26" East a distance of 270.71 feet; THENCE South 00°14'34" East a distance of 557.00 feet to the Northeast corner of Lot 2, Block 6 of the filed final plat of PARK VALLEY ADDITION SECTION 1 (as filed in Book 2767, Page 228-229);

THENCE along the boundary of said final plat the following nine (9) courses:

- 1) South 89°45'26" West a distance of 165.07 feet;
- 2) South 00°14'34" East a distance of 3.00 feet;
- 3) South 89°45'26" West a distance of 537.92 feet;
- 4) South 00°02'47" East a distance of 7.15 feet;
- 5) South 89°57'13" West a distance of 165.00 feet;
- 6) South 00°02'47" East a distance of 5.00 feet;
- 7) South 89°57'13" West a distance of 130.59 feet;
- 8) North 45°02'47" West a distance of 122.10 feet;
- 9) North 69°06'26" West a distance of 146.15 feet;

THENCE North 00°14'34" West a distance of 236.80 feet; THENCE North 89°45'26" East a distance of 115.00 feet; THENCE North 00°14'34" West a distance of 195.00 feet; THENCE North 89°45'26" East a distance of 835.27 feet to the POINT OF BEGINNING. Said tract contains 14.85 acres, more or less.



LOCATION MAP
SCALE: 1" = 2000'

LEGEND

R.O.W. RIGHT OF WAY
P.O.C. POINT OF COMMENCEMENT
P.O.B. POINT OF BEGINNING
(N.R.) NON-RADIAL
U/E UTILITY EASEMENT
D/E DRAINAGE EASEMENT
SSW/E SANITARY SEWER EASEMENT
P/E PRIVATE EASEMENT
E/E ELECTRIC EASEMENT
B/L BUILDING SETBACK LINE
-1000- ADDRESSES

Date: July 8, 2025
SMC Consulting Engineers, P.C.
815 W. Main Street
Oklahoma City, OK 73106
Ph.: (405)232-7715
Oklahoma CA #464 Exp. 6/30/2027

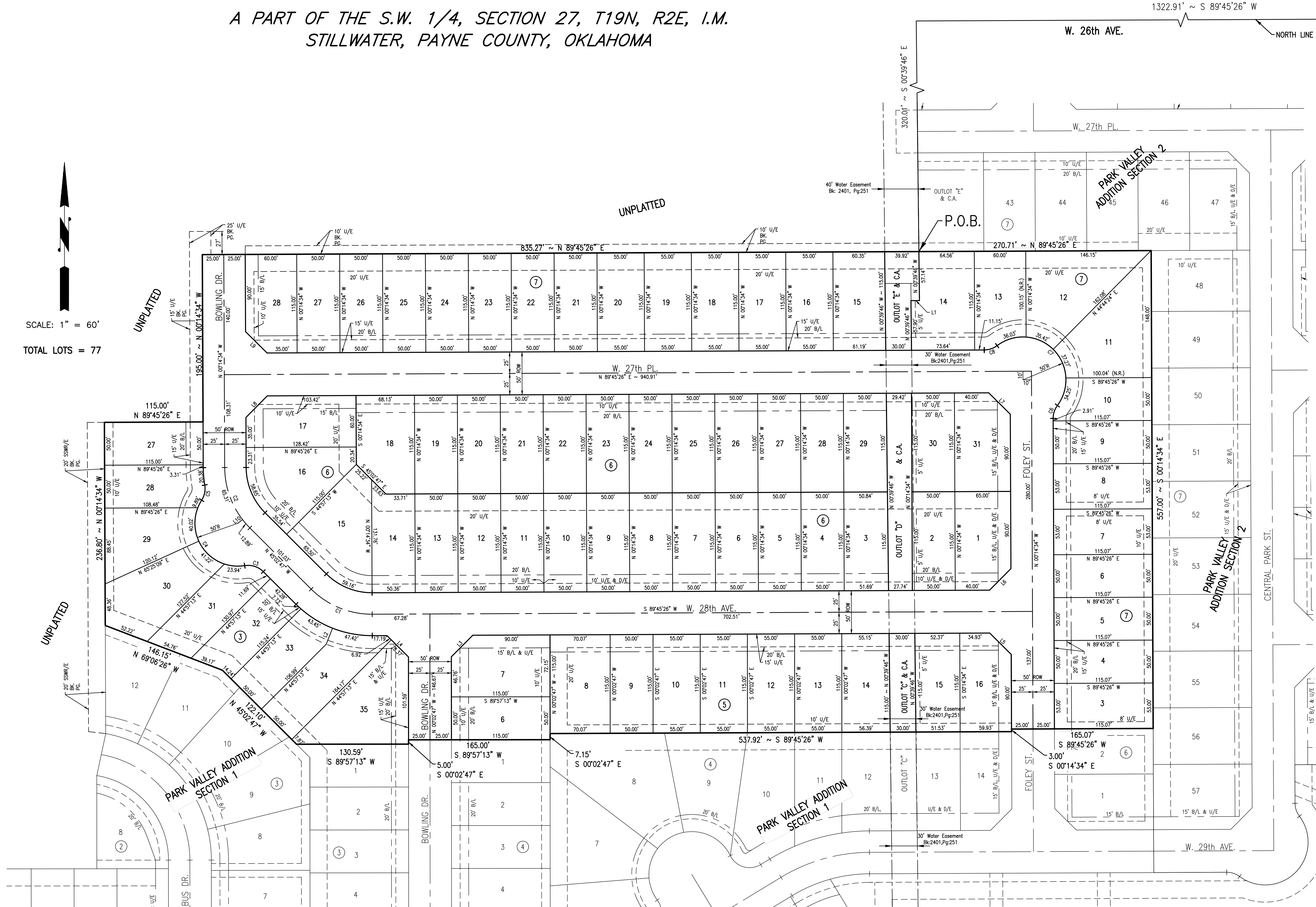
PARK VALLEY ADDITION SECTION 3
FINAL PLAT
SHEET 2 OF 2

CURVE TABLE

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	TANGENT	CHORD BEARING	CHORD LENGTH
C1	45°11'47"	100.00'	78.88'	41.62'	S 67°38'41" E	76.85'
C2	44°48'13"	100.00'	78.20'	41.22'	S 72°38'40" E	76.22'
C3	54°12'09"	25.00'	23.65'	12.79'	N 72°08'52" W	22.78'
C4	131°51'03"	50.00'	115.06'	111.91'	S 33°19'26" E	91.30'
C5	42°11'09"	25.00'	18.41'	9.64'	N 11°30'32" E	17.99'
C6	36°57'26"	25.00'	16.13'	8.35'	S 18°14'09" W	15.85'
C7	163°49'57"	50.00'	142.97'	351.91'	N 45°11'57" W	99.01'
C8	36°52'12"	25.00'	16.09'	8.33'	N 71°19'20" E	15.81'

LINE TABLE

LINE	BEARING	DISTANCE
L1	S 89°57'13" W	9.92'
L2	N 21°29'39" E	20.00'
L3	N 44°51'20" E	35.42'
L4	S 45°08'40" E	35.29'
L5	N 45°14'34" W	35.36'
L6	N 44°45'26" E	35.36'
L7	N 45°14'34" W	35.36'
L8	S 44°45'26" W	35.36'
L9	N 45°14'34" E	35.36'
L10	N 52°20'30" E	7.92'



REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	3.e. CC-25-121
Previous/Related Action:	October 2, 2023: Council approved the selection of Lippert Brothers, Inc. as Construction Manager at Risk (CMAR) to provide services for the remaining design, bidding, and construction of the new terminal building, parking, and parking access development at Stillwater Regional Airport. July 15, 2024: Council approved the award of contracts by CMAR, Lippert Brothers, Inc. for Bid Package 1 (Phase 1) for Stillwater Regional Airport terminal project for a total of \$18,592,300. August 1, 2024: Council approved amendment to the McFarland Architects Professional Services Agreement for Stillwater Regional Airport Terminal Improvement Program for architecture and engineering services for the new terminal.
Background/Issue:	The Stillwater Regional Airport (SWO) new terminal project is ongoing and has surpassed 40% completion. On April 23, 2015, the City of Stillwater entered into an agreement with McFarland Architects for a Professional Services Agreement for the original Stillwater Regional Airport Terminal Improvement Program. On December 16, 2024, the Council ratified the approval and submission to the FAA of the SWO Capital Improvement Program (CIP), which identified 3 FAA funding opportunities in FY25 for PBB, FFE, and BHS for the new terminal. On July 7, 2025, Council approved the award of a bid for a PBB at the Stillwater Regional Airport terminal to the low bidder, Oshkosh AeroTech, LLC, in the amount of \$1,150,522. Total PBB project costs are \$1,313,542, which includes the PBB, baggage conveyor, CA fees, terminal apron revision to install PBB pedestal, and associated CMAR fees for potable water cabinet, concrete, electrical, markings, and GCs/fees. On July 7, 2025, Council approved the award of bid for FFE to L&M Office Furniture at the Stillwater Regional Airport terminal with a total bid of \$467,638.84 (base bid \$456,554 plus alternate

of \$11,084.84 for ineligible FFE), with total allocation for all FFE project costs of \$769,471. Total FFE project costs include FFE, Beacon relocation costs, CA fees, and Wayfinding costs.

On July 21, 2025, Council approved the award of bid for BHS to Robson Handling Technology with a total bid of \$1,127,022, with total allocation for all BHS project costs including CA fees of \$1,183,222.

Proposal/Solution:

Approve three (3) amendments (Amendments 006G, 006H, 006I) to the McFarland Architects Professional Services Agreement for Stillwater Regional Airport Terminal Improvement Program for architecture and engineering (A/E) services in support of the PBB, FFE, and BHS in the amount of \$156,335. These amendments, once signed, issue the Notices to Proceed for the construction administration and associated services as described in these amendments.

A/E services for PBB, FFE, and BHS were planned and included in the August 2024 McFarland Agreement, with notice to proceed required prior to moving forward with A/E support. The PBB cost estimate increased due to required apron remediation to accommodate the PBB, and the FFE estimate increased due to FAA opportunity to including critical wayfinding design and signage in the new terminal. All PBB and FFE costs were included in the PBB and FFE grants, respectively. No additional BHS A/E fees were required and A/E costs match the August 2024 McFarland Agreement estimate.

Financial Source/Impact:

FAA grant funding (95%) and previously approved and allocated City match (5%).

Related Strategic Priority:

#1 EFFECTIVE SERVICES & ACCOUNTABLE GOVERNMENT

Recommended Action/Motion:

Motion to approve three (3) amendments (Amendments 006G, 006H, 006I) to the McFarland Architects Professional Services Agreement for Stillwater Regional Airport Terminal Improvement Program for architecture and engineering services in support of the PBB, FFE, and BHS in the amount of \$156,335 and allow City Manager to sign all related documents.

Prepared By:

Kellie Reed, Airport Director

Reviewed By:

Kellie Reed
Christy Cluck
Teresa Kadavy

Submitted By:

Brady Moore, City Manager

Attachments

1. McFarland signed agreement 2024-2026

2. SWO AE 006G - PBB Signed 8.25.25
3. SWO AE 006H - FFE and WFP signed 8.25.25
4. SWO AE 006I - BHS signed 8.25.25



**Summary of Professional A/E Services for the
Stillwater Regional Airport
Terminal Improvement Program
(Continuation 2022 and 2023 Agreements)**

July 15, 2024

Description of Services for 2024, 2025 and 2026

This document is provided to accompany the submission of Construction Phase Services agreements to update and expand current agreements between the City of Stillwater and McFarland Architects, P.C. The services are provided over multiple years and the fee is allocated into project years.

This phase of professional services details the services provided by the attached AIA Document G802-2017 which is the Amendment to the Professional Services Agreement – Amendment No. 006D .

These include:

1. Bidding and Negotiation Phase Services for the A/E Services, described in attached document Exhibit P.3.
2. Construction Phase Services of the Project, described in P.3.
3. Contract Administration Phase Services for the Furniture, Furnishings and Equipment for Terminal. Refer to Exhibit R.1 included in the 2023 Agreement approved by the City of Stillwater.
4. Program Management of the Olsson Engineers who are under contract with the City of Stillwater directly to provide professional services for the design of the parking, parking access road and the roundabout including design of the Public Utility Relocations. Olsson will also be providing Land Acquisition Services to obtain the land needed to construct the Roundabout.

Work outside of the A/E agreements as described include the following:

- A. Construction Manager at Risk (CMAR) for the Construction of the Terminal.
- B. Air Traffic Control Tower (ATCT) Architecture and Engineering
- C. ATCT Construction
- D. ATCT Site Infrastructure Professional Engineering Services
- E. ATCT Site Utility Expansion Design Fees and the Cost of Construction



AIA® Document G802® – 2017

Amendment to the Professional Services Agreement

PROJECT: *(name and address)*
Stillwater Regional Airport Terminal
2020-10 West Airport Road
Stillwater, OK 74075

AGREEMENT INFORMATION:
Date: April 17, 2015

AMENDMENT INFORMATION:
Amendment Number: 006D

Date: July 15, 2024

OWNER: *(name and address)*
City of Stillwater
Stillwater Regional Airport
723 S. Lewis, P.O. Box 1449
Stillwater, OK 74076

ARCHITECT: *(name and address)*
McFarland Architects, P.C.
1924 S. Utica Ave., Suite 1216
Tulsa, OK 74104

The Owner and Architect amend the Agreement as follows:
Services for Architecture and Engineering for Terminal, described in Exhibit P.3.

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:
\$826,320 for the total fee, to be segmented as described in P.3.

The services are provided over multiple years and the fee is allocated into project years. The Architect and Engineers's fee will be available for each year following approval of that year's FAA funding. The Architect acknowledges and understands that the City of Stillwater is subject to the debt limitations of the Oklahoma Constitution. The Architect further acknowledges and agrees that this agreement extends over more than one fiscal year and pursuant to constitutional debt limitations there is no guarantee that funding will be available to service this Agreement after July 1, 2025. In the event that no appropriation is made that is sufficient to service this Agreement, then this Agreement shall be suspended except for the payment of Architect's invoices for which an appropriation has been made. The City of Stillwater shall notify the Architect in writing of any such non-appropriation of funds at the earliest possible date. Further, work under this Agreement shall not proceed in future fiscal years until a Notice to Proceed has been issued by the City of Stillwater.

The amount does not include:

- A. City of Stillwater reserves \$59,850 for KSA to provide Grant Administration for years 2024, 2025 and 2026.
- B. City of Stillwater reserves \$39,300 for Olsson professional engineering service to provide construction administration for the terminal parking, parking access road and utilities.
- C. City of Stillwater Reserves \$9,200 for Olsson to obtain a consultant for the Land Acquisition for the Roundabout.

Schedule Adjustment:
30 months from date of signed agreement.

SUBMITTED BY: McFarland Architects, P.C.

Connie S. McFarland
(Signature)

Connie S. McFarland, President
(Printed name and title)

7/15/24
(Date)

AGREED TO: City of Stillwater

(Signature)

Kimberly Carnley, City Attorney
(Printed name and title)

(Date)

(Signature)

Kimberly Meek, City Manager
(Printed name and title)

(Date)

(Signature)

Will Joyce, Mayor
(Printed name and title)

(Date)

Exhibit P.3
Scope of Service for Construction Documents
Stillwater Regional Airport Terminal

- P.3.1 The terms of this service are defined in Scope of Architects Basic Services AIA B201-2007 – Article 2.
- P.3.2 Services described in paragraph 2.5 Bidding and Negotiation and 2.6 Construction Phase Services will be completed with this scope.
- P.3.3 Included in this agreement is the program management of Site Development Phases which are documented with Olsson. This includes Construction Phase Services for parking, parking access road, roundabout and utilities. Olsson work is performed under agreement directly with the City of Stillwater.
- P.3.4 AIA B201-2007 Services include.
- 3.4.1 Architectural
 - 3.4.2 Structural
 - 3.4.3 Civil
 - 3.4.4 Mechanical
 - 3.4.5 Plumbing
 - 3.4.6 Fire Protection
 - 3.4.7 Electrical Including IT/AV/Security
 - 3.4.8 Terminal Equipment – Baggage Handling Equipment and Passenger Boarding Bridge
 - 3.4.9 Interior Design
 - 3.4.10 Furniture, Furnishing and Equipment

Exhibit P.3 B201-2007 – Cost Basis Table For Multi-Year Contract

Construction Phase Services

Consultant/Discipline	Total Fees
McFarland Architects, P.C/Architect	\$560,800
Wallace/Structural	\$25,380
Parkhill	\$200,140
Reimbursable Expense	\$40,000
TOTAL COST Construction Phase Services	\$826,320

Segmented By FFY

2024 – Phase One: Terminal and Site	\$542,485
2025 – PBB, BHS, FFE (Phase One Continued)	\$177,635
2026 – PBB, BHS, FFE (Phase One Completed)	\$106,200
Total	\$826,320



**Summary of 2025 Professional A/E Services
Amendment for the Passenger Boarding Bridge Construction Phase Services
Stillwater Regional Airport Terminal - Phase Four**

August 25, 2025

This Summary is provided to accompany Amendment 006G to the Stillwater Regional Airport Terminal agreement to denote the originally planned and additional services for the apron modifications required to accommodate the passenger boarding bridge (PBB). The description of services is outlined in Exhibit P.6 which states the scope of services and outlines the professional services proposed for the construction phase services.

The Amendment No. 006G, once signed, issues the Notice to Proceed for the Passenger Boarding Bridge Construction Administration Services described in Amendment 006D. The PBB Services are funded by the City of Stillwater match and by FAA Grant 3-40-0090-047-2025.

Additional services included in Exhibit P.6 and Task No. 006G are proposed as follows:

1. Create documents to illustrate modifications to existing airside paving to prepare for the installation of the PBB pedestal.
2. This includes recommendation for expanding airside paving markings in the area adjacent to the PBB.
3. Coordinate with the Construction Manager at Risk and the City of Stillwater.
4. This includes review of submittals provided by the PBB contractor and documenting replacement of the paving surrounding the PBB pedestal.
5. Construction Phase Services to review the installation of the PBB is also included.

**AIA**[®]**Document G802[®] – 2017*****Amendment to the Professional Services Agreement***

PROJECT: *(name and address)*
 Stillwater Regional Airport - New
 Terminal Building
 2020-10 West Airport Road
 Stillwater, Oklahoma 74075

AGREEMENT INFORMATION:
 Date: April 23, 2015

AMENDMENT INFORMATION:
 Amendment Number: 006G
 Date: August 25, 2025

OWNER: *(name and address)*
 City of Stillwater
 Stillwater Regional Airport
 723 S. Lewis, P.O. Box 1449
 Stillwater, Oklahoma 74076

ARCHITECT: *(name and address)*
 McFarland Architects, P.C.
 1924 S Utica Ave., Suite 1216
 Tulsa, Oklahoma 74104

The Owner and Architect amend the Agreement as follows:

Amendment 006D approved by City of Stillwater August 5, 2024 included \$22,500 professional service fee (a portion of the \$106,200) segment into years 2025 and 2026. Approving amendment 006G, issues a Notice to Proceed for the construction phase services for the Passenger Boarding Bridge.

The Additional Scope of Services for the Passenger Boarding Bridge apron modifications for the new Terminal is described in the attached Exhibit P.6.

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:
 For Design and Construction Phase Fees:

Total Fixed Fee \$20,545.00

Amendment 006D included \$22,500 Professional Service Fee for PBB Construction Phase Services.

PBB Total Support: \$43,045.00

Schedule Adjustment:
 None.

SIGNATURES:

McFarland Architects, P.C.

ARCHITECT *(Firm name)*

Connie S. McFarland

SIGNATURE

Connie S. McFarland, President

PRINTED NAME AND TITLE

8.25.2025

DATE

City of Stillwater

OWNER *(Firm name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE

Exhibit P.6
Scope of Services for the Passenger Boarding Bridge (PBB)
Stillwater Regional Airport

Additional Professional A/E Services includes:

- P.6.1 Assist with Recommendation for Airside Apron modifications to accommodate the PBB.
- P.6.2 Review submittals for concrete and apron markings and structural during construction.
- P.6.3 Site Visit to review installation of apron.

Exhibit P.6 - Cost Basis Table for Construction Phase	
Consultant/Discipline for Design Services	Fees
McFarland Architects, P.C./Architect	\$2,680.00
Parkhill	\$17,865.00
COST	\$20,545.00
Original Professional A/E Services included in 006D	\$22,500.00
Total A/E Services for PBB	\$43,045.00



**Summary of 2025 Professional A/E Services
Amendment for the Furniture, Furnishings & Equipment/ Wayfinding
Stillwater Regional Airport Terminal
Phase Five and Phase Seven**

August 25, 2025

This Summary is provided to accompany Amendment 006H to the Stillwater Regional Airport Terminal agreement to denote the originally planned and additional services for the Wayfinding. The description of services is outlined in Exhibit P.7 which states the scope of services and outlines the professional services proposed for the Wayfinding design; documentation; bidding; and, construction phase services.

The Amendment No. 006H, once signed, issues the Notice to Proceed for the Furniture, Furnishings and Equipment (FFE) Construction Administration Services described in Amendment 006D. The FFE Services are funded by the City of Stillwater match and by FAA Grant 3-40-0090-045-2025.

Additional services included in Exhibit P.7 and Task No. 006H are proposed as follows:

1. Design Wayfinding elements within the new terminal.
2. Create documents to illustrate Wayfinding design.
3. Coordinate with the City of Stillwater IonWave Bid Format to bid Wayfinding Package.
4. Construction Administration Phase Services includes review of submittals and make two site visits to review the installation of the Wayfinding.

AIA® Document G802® – 2017

Amendment to the Professional Services Agreement

PROJECT: *(name and address)*
Stillwater Regional Airport - New
Terminal Building
2020-10 West Airport Road
Stillwater, Oklahoma 74075

AGREEMENT INFORMATION:
Date: April 23, 2015

AMENDMENT INFORMATION:
Amendment Number: 006H
Date: August 25, 2025

OWNER: *(name and address)*
City of Stillwater
Stillwater Regional Airport
723 S. Lewis, P.O. Box 1449
Stillwater, Oklahoma 74076

ARCHITECT: *(name and address)*
McFarland Architects, P.C.
1924 S Utica Ave., Suite 1216
Tulsa, Oklahoma 74104

The Owner and Architect amend the Agreement as follows:

Amendment 006D approved by the City of Stillwater August 5, 2024 included \$27,500 professional service fee (a portion of the \$106,200) segmented into years 2025 and 2026. Approving amendment 006H issues a Notice to Proceed into the construction phase services for the Furniture, Furnishings and Equipment.

The Wayfinding Package for the new Terminal is described in the attached Exhibit P.7.

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:
Total Fixed Fee - \$29,590

Amendment 006D included \$27,500 Professional Services Fee for FFE Construction Phase Services.

FFE Total Support: \$57,090

Schedule Adjustment:
None.

SIGNATURES:

McFarland Architects, P.C.
ARCHITECT *(Firm name)*


SIGNATURE

Connie McFarland, President
PRINTED NAME AND TITLE

8.25.2025
DATE

City of Stillwater
OWNER *(Firm name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE

Exhibit P.7
Scope of Services for the Wayfinding Package
Stillwater Regional Airport

Additional Professional A/E Services includes:

- P.7.1 Design Wayfinding Elements within the New Terminal.
- P.7.2 Prepare Construction Documents.
- P.7.3 Coordinate with City of Stillwater IonWave Bid Format to bid Wayfinding Package.
- P.7.4 Construction Phase Services includes submittal review and two site visits.

Exhibit P.6 - Cost Basis Table

Consultant/Discipline for Design Services	Fees
McFarland Architects, P.C/Architect	\$13,281.00
PathEGD	\$14,909.00
Reimbursable Expenses	\$1,400.00
COST	\$29,590.00
<u>Original Professional A/E Services included in 006D</u>	<u>\$27,500.00</u>
<u>Total A/E Services for FFE</u>	<u>\$57,090.00</u>



AIA® Document G802® – 2017

Amendment to the Professional Services Agreement

PROJECT: *(name and address)*
Stillwater Regional Airport - New
Terminal Building
2020-10 West Airport Road
Stillwater, Oklahoma 74075

AGREEMENT INFORMATION:
Date: April 23, 2015

AMENDMENT INFORMATION:
Amendment Number: 006I
Date: August 25, 2025

OWNER: *(name and address)*
City of Stillwater
Stillwater Regional Airport
723 S. Lewis, P.O. Box 1449
Stillwater, Oklahoma 74076

ARCHITECT: *(name and address)*
McFarland Architects, P.C.
1924 S Utica Ave., Suite 1216
Tulsa, Oklahoma 74104

The Owner and Architect amend the Agreement as follows:

Amendment 006D approved by the City of Stillwater August 5, 2024 included \$56,200 for professional service fee (a portion of the \$106,200) segmented into years 2025 and 2026. Approving amendment 006I, issues a Notice to Proceed for the construction phase services for the Baggage Handling System (BHS).

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:
Not Applicable

Schedule Adjustment:
None

SIGNATURES:

McFarland Architects, P.C.
ARCHITECT *(Firm name)*

SIGNATURE

Connie S. McFarland, President
PRINTED NAME AND TITLE

DATE

City of Stillwater
OWNER *(Firm name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	3.f. CC-25-122
Previous/Related Action:	Amendment to the McFarland Architects Professional Services Agreement for Stillwater Regional Airport (SWO) Terminal Improvement Program for continued terminal Phase 1 support in the amount of \$177,635. October 2, 2023: Council approved the selection of Lippert Brothers, Inc. as Construction Manager at Risk (CMAR) to provide services for the remaining design, bidding, and construction of the new terminal building, parking, and parking access development at Stillwater Regional Airport. July 15, 2024: Council approved the award of contracts by CMAR, Lippert Brothers, Inc. for Bid Package 1 (Phase 1) for Stillwater Regional Airport terminal project for a total of \$18,592,300. August 1, 2024: Council approved amendment to the McFarland Architects Professional A/E Services Agreement for Stillwater Regional Airport Terminal Improvement Program for A/E services for the new terminal Phase 1 construction.
Background/Issue:	The new terminal project is ongoing and has surpassed 40% completion. On April 23, 2015, the City of Stillwater entered into an agreement with McFarland Architects for a Professional A/E Services Agreement for the original Stillwater Regional Airport Terminal Improvement Program. Architecture and engineering (A/E) services were planned and included in the August 2024 McFarland Amendment (006D), with notice to proceed required prior to moving forward with A/E support for future work beyond FY24 funded A/E services. Amendment 006D reflected future terminal A/E costs for FY25 and FY26. There is a separate council report for 3 additional accompanying amendments related to specific A/E support for terminal equipment phases. A/E services required to continue moving forward with the new terminal Phase 1 support remain at the cost estimated in the 2024 Amendment at \$177,635. The FAA has advised that these A/E costs are required to be reimbursed

	under Phase 1 funding and advised the airport may include these costs for consideration of FAA reimbursement at the time of terminal grant closeout (with other contingency costs).
Proposal/Solution:	Approve Amendment 006J to the McFarland Architects Professional A/E Services Agreement for Stillwater Regional Airport Terminal Improvement Program for continued terminal Phase 1 support in the amount of \$177,635. This amendment, once signed, issues the Notices to Proceed for the construction administration and associated services as described in this amendment.
Financial Source/Impact:	A budget amendment is needed from the City Capital Fund to encumber \$177,635 to the McFarland Agreement Phase 1 PO. This Airport plans to include these costs for consideration of FAA reimbursement at the time of terminal grant closeout.
Related Strategic Priority:	#1 EFFECTIVE SERVICES & ACCOUNTABLE GOVERNMENT
Recommended Action/Motion:	Motion to approve Amendment 006J to the McFarland Architects Professional A/E Services Agreement for Stillwater Regional Airport Terminal Improvement Program for continued terminal Phase 1 support in the amount of \$177,635, approve associated budget amendments and authorize City Manager to sign all related documents.
Prepared By:	Kellie Reed, Airport Director
Reviewed By:	Kellie Reed Christy Cluck Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. McFarland signed agreement 2024-2026
2. SWO AE 006J - CA NTP signed 8.25.25
3. Budget Amendments



**Summary of Professional A/E Services for the
Stillwater Regional Airport
Terminal Improvement Program
(Continuation 2022 and 2023 Agreements)**

July 15, 2024

Description of Services for 2024, 2025 and 2026

This document is provided to accompany the submission of Construction Phase Services agreements to update and expand current agreements between the City of Stillwater and McFarland Architects, P.C. The services are provided over multiple years and the fee is allocated into project years.

This phase of professional services details the services provided by the attached AIA Document G802-2017 which is the Amendment to the Professional Services Agreement – Amendment No. 006D .

These include:

1. Bidding and Negotiation Phase Services for the A/E Services, described in attached document Exhibit P.3.
2. Construction Phase Services of the Project, described in P.3.
3. Contract Administration Phase Services for the Furniture, Furnishings and Equipment for Terminal. Refer to Exhibit R.1 included in the 2023 Agreement approved by the City of Stillwater.
4. Program Management of the Olsson Engineers who are under contract with the City of Stillwater directly to provide professional services for the design of the parking, parking access road and the roundabout including design of the Public Utility Relocations. Olsson will also be providing Land Acquisition Services to obtain the land needed to construct the Roundabout.

Work outside of the A/E agreements as described include the following:

- A. Construction Manager at Risk (CMAR) for the Construction of the Terminal.
- B. Air Traffic Control Tower (ATCT) Architecture and Engineering
- C. ATCT Construction
- D. ATCT Site Infrastructure Professional Engineering Services
- E. ATCT Site Utility Expansion Design Fees and the Cost of Construction



AIA® Document G802® – 2017

Amendment to the Professional Services Agreement

PROJECT: *(name and address)*
Stillwater Regional Airport Terminal
2020-10 West Airport Road
Stillwater, OK 74075

AGREEMENT INFORMATION:
Date: April 17, 2015

AMENDMENT INFORMATION:
Amendment Number: 006D

Date: July 15, 2024

OWNER: *(name and address)*
City of Stillwater
Stillwater Regional Airport
723 S. Lewis, P.O. Box 1449
Stillwater, OK 74076

ARCHITECT: *(name and address)*
McFarland Architects, P.C.
1924 S. Utica Ave., Suite 1216
Tulsa, OK 74104

The Owner and Architect amend the Agreement as follows:
Services for Architecture and Engineering for Terminal, described in Exhibit P.3.

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:
\$826,320 for the total fee, to be segmented as described in P.3.

The services are provided over multiple years and the fee is allocated into project years. The Architect and Engineers's fee will be available for each year following approval of that year's FAA funding. The Architect acknowledges and understands that the City of Stillwater is subject to the debt limitations of the Oklahoma Constitution. The Architect further acknowledges and agrees that this agreement extends over more than one fiscal year and pursuant to constitutional debt limitations there is no guarantee that funding will be available to service this Agreement after July 1, 2025. In the event that no appropriation is made that is sufficient to service this Agreement, then this Agreement shall be suspended except for the payment of Architect's invoices for which an appropriation has been made. The City of Stillwater shall notify the Architect in writing of any such non-appropriation of funds at the earliest possible date. Further, work under this Agreement shall not proceed in future fiscal years until a Notice to Proceed has been issued by the City of Stillwater.

The amount does not include:

- A. City of Stillwater reserves \$59,850 for KSA to provide Grant Administration for years 2024, 2025 and 2026.
- B. City of Stillwater reserves \$39,300 for Olsson professional engineering service to provide construction administration for the terminal parking, parking access road and utilities.
- C. City of Stillwater Reserves \$9,200 for Olsson to obtain a consultant for the Land Acquisition for the Roundabout.

Schedule Adjustment:
30 months from date of signed agreement.

SUBMITTED BY: McFarland Architects, P.C.

Connie S. McFarland
(Signature)

Connie S. McFarland, President
(Printed name and title)

7/15/24
(Date)

AGREED TO: City of Stillwater

(Signature)

Kimberly Carnley, City Attorney
(Printed name and title)

(Date)

(Signature)

Kimberly Meek, City Manager
(Printed name and title)

(Date)

(Signature)

Will Joyce, Mayor
(Printed name and title)

(Date)

Exhibit P.3
Scope of Service for Construction Documents
Stillwater Regional Airport Terminal

- P.3.1 The terms of this service are defined in Scope of Architects Basic Services AIA B201-2007 – Article 2.
- P.3.2 Services described in paragraph 2.5 Bidding and Negotiation and 2.6 Construction Phase Services will be completed with this scope.
- P.3.3 Included in this agreement is the program management of Site Development Phases which are documented with Olsson. This includes Construction Phase Services for parking, parking access road, roundabout and utilities. Olsson work is performed under agreement directly with the City of Stillwater.
- P.3.4 AIA B201-2007 Services include.
- 3.4.1 Architectural
 - 3.4.2 Structural
 - 3.4.3 Civil
 - 3.4.4 Mechanical
 - 3.4.5 Plumbing
 - 3.4.6 Fire Protection
 - 3.4.7 Electrical Including IT/AV/Security
 - 3.4.8 Terminal Equipment – Baggage Handling Equipment and Passenger Boarding Bridge
 - 3.4.9 Interior Design
 - 3.4.10 Furniture, Furnishing and Equipment

Exhibit P.3 B201-2007 – Cost Basis Table For Multi-Year Contract

Construction Phase Services

Consultant/Discipline	Total Fees
McFarland Architects, P.C/Architect	\$560,800
Wallace/Structural	\$25,380
Parkhill	\$200,140
Reimbursable Expense	\$40,000
TOTAL COST Construction Phase Services	\$826,320

Segmented By FFY

2024 – Phase One: Terminal and Site	\$542,485
2025 – PBB, BHS, FFE (Phase One Continued)	\$177,635
2026 – PBB, BHS, FFE (Phase One Completed)	\$106,200
Total	\$826,320



AIA® Document G802® – 2017

Amendment to the Professional Services Agreement

PROJECT: *(name and address)*
Stillwater Regional Airport - New
Terminal Building
2020-10 West Airport Road
Stillwater, Oklahoma 74075

AGREEMENT INFORMATION:
Date: April 23, 2015

AMENDMENT INFORMATION:
Amendment Number: 006J

Date: August 25, 2025

OWNER: *(name and address)*
City of Stillwater
Stillwater Regional Airport
723 S. Lewis, P.O. Box 1449
Stillwater, Oklahoma 74076

ARCHITECT: *(name and address)*
McFarland Architects, P.C.
1924 S Utica Ave., Suite 1216
Tulsa, Oklahoma 74104

The Owner and Architect amend the Agreement as follows:

Amendment 006D approved by the City of Stillwater August 5, 2024 included \$177,635 professional services fee segmented into years 2025 and 2026. Approving amendment 006J, issues a Notice to Proceed to complete the construction phase services for the new terminal at Stillwater Regional Airport.

The Architect's compensation and schedule shall be adjusted as follows:

Compensation Adjustment:

Amendment 006D reflected \$177,635 in Construction Phase Services to be performed in 2025. The FAA requires this cost to be added to Phase 1. City of Stillwater has been advised by the FAA to seek reimbursement for these \$177,635 funds under Phase 1.

Schedule Adjustment:

None.

SIGNATURES:

McFarland Architects, P.C.

ARCHITECT *(Firm name)*

Connie McFarland

SIGNATURE

Connie McFarland, President

PRINTED NAME AND TITLE

8.25.2025

DATE

City of Stillwater

OWNER *(Firm name)*

SIGNATURE

PRINTED NAME AND TITLE

DATE

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Airport

Requested by: Christy Cluck

Department:

Explanation:

Expenditures:
Appropriate transfer of funds from the City Capital Fund to the Airport Grant Fund for execution of McFarland Architect task order related to the construction of the new airport terminal. Project funded from the City Capital Fund with intent to seek reimbursement from the FAA during grant closeout.

Increase:

Account Name	Account Number (xxxxxx-xxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Transfer Out	1050000 - 71000		\$ 0	\$ 177,635	\$ 177,635
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0

Decrease:

	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 177,635

Reviewed by Department Manager:

Date:

Reviewed by Finance:

Date:

Christy Cluck

9-2-25

Approved by CMO:

Date:

Approved by City Council:

Date:

☐ Yes

☐ No

Processed by Finance:

Date:

Set ID:

Date Sent to SA&I:

--Print on Yellow Paper--

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449
Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Airport

Explanation:

Requested by: Christy Cluck

Revenue:
Increase transfer-in to reflect transfer of funds from the City Capital Fund to the Airport Grant Fund for execution of McFarland Architect task order related to the construction of the new airport terminal. Project funded from the City Capital Fund with intent to seek reimbursement from the FAA during grant closeout.

Account Name	Account Number (xxxxxx-xxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Transfer In	8200000 - 61000		\$ 369,566	\$ 177,635	\$ 547,201
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0

Decrease:

Net Change: (will usually result in a total increase or decrease)

\$ 177,635

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: 9-2-25

Approved by CMO: _____

Date: _____

Approved by City Council: _____

Date: _____

☐ Yes

☐ No

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

--Print on Yellow Paper--

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449
Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Airport

Requested by: Christy Cluck

Explanation:

Expenditures:
Appropriate funds for execution of McFarland Architect task order related to the construction of the new airport terminal.
Project funded from the City Capital Fund with intent to seek reimbursement from the FAA during grant closeout.

Account Name	Account Number (xxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
McFarland Amendment 006D	8207010 - 54009	26AP01820	\$ 0	\$ 177,635	\$ 177,635
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 177,635

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: 9-2-25

Approved by CMO: _____

Date: _____

Approved by City Council: _____

Date: _____

☐ Yes

☐ No

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

--Print on Yellow Paper--

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	3.g. CC-25-123
Previous/Related Action:	
Background/Issue:	• Park Valley Land Fund, LLC. owns property located on the southeast corner of S. Western Road and W. 26th Avenue. • This request is for acceptance of public improvements which include: water, sanitary sewer, storm sewer, and paving that will serve section 3 of the Park Valley residential subdivision. • This acceptance is for 2,935 total linear feet of water line, 1,949 total linear feet of sanitary sewer line, 1,016 total linear feet of storm sewer line, and 6,896 square yards of concrete paving. • The waterline constructed consists of 441 linear feet of 8in. HDPE pipe, and 2,494 linear feet of 6in. PVC pipe. • The sanitary sewer line constructed consists of 1,949 linear feet of 8in. PVC pipe. • The storm sewer line constructed consists of 67 linear feet of 18 in. RCP pipe, 763 linear feet of 24in. RCP pipe, 71 linear feet of 30 in. RCP pipe, and 115 linear feet of 43 ¾ in. x 26 5/8 in. RCP arch pipe.
Proposal/Solution:	Staff recommends acceptance of the public improvements for Park Valley Sec. 3.
Financial Source/Impact:	There is no additional financial impact from the acceptance of this public infrastructure.
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	Motion to accept the public improvements for Park Valley Sec. 3.
Prepared By:	Joshua Brown, Project Manager
Reviewed By:	David Barth Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Bond Storm Bond 2297320 09.09.2025
2. Bond Water Bond 2297320 09.09.2025
3. Bond Sewer Bond 2297318 09.09.2025

4. Bond Paving Bond 2297321 09.09.2025

**STILLWATER COMMUNITY DEVELOPMENT
SUBDIVISION MAINTENANCE BOND**

Subdivision Name: Park Valley Section 3

Plat Case Number: IMP-23-07

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, MK Excavation, LLC, as PRINCIPAL, and West Bend Insurance Company, a corporate entity organized under the Laws of the State of Wisconsin and authorized and licensed to do business within the State of Oklahoma, as SURETY, are hereby held and firmly bound unto the CITY OF STILLWATER, OKLAHOMA, a Municipal Corporation hereinafter called CITY, in the sum of Three Hundred Fifty-One Thousand Six Hundred Forty-Five Dollars and Zero Cents Dollars (\$ 351,645.00), 100% of the construction cost of all improvements and utilities, for the payment whereof well and truly to be made, the PRINCIPAL and SURETY herein hereby bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the subject improvements and utilities are related to the above-named subdivision located on a tract of land described as follows (insert legal description):

Park Valley Section 3 - Storm - Case # IMP-23-07

THE CONDITION OF THIS BOND is such that the said Principal and Surety herein named do hereby agree and bind themselves unto and guarantee the City of Stillwater that all streets, water, sewer, stormwater and other infrastructure improvements and utilities dedicated to the City of Stillwater within said subdivision were OR WILL BE constructed by Principal with materials and in such a manner that the same shall endure without need of any repair whatsoever for a period of one (1) year from and after the formal acceptance of said improvements and utilities by the City of Stillwater, and that all the expense of said Principal and/or Surety, all needed repairs within said period of one (1) year shall be promptly repaired, within ten (10) days after notice to said Principal by letter deposited in the United States mail, addressed to said Principal at PO Box 863 Stillwater, OK 74076 and copied to said Surety; and it being further agreed that upon the neglect, failure or refusal of the Principal to make any needed repairs upon said infrastructure improvements or utilities or any work connected therewith within the aforesaid ten (10) day period or other City negotiated period, the said Principal and Surety shall jointly and severally be liable to the City of Stillwater, Oklahoma, for the costs and expenses of making such repairs or making good such defects or imperfections.

NOW, THEREFORE, if the said Principal and Surety shall faithfully and securely keep and perform all the obligations herein provided to be kept and performed by them, or either of them, then this obligation shall be null and void and of no force and effect, otherwise to be and remain in full force and effect at all times.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK.

IN WITNESS WHEREOF, the said Principal has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

MK Excavation, LLC

Principal

By: Angus MacIntyre

Title Project Manager

IN WITNESS WHEREOF, the said Surety has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

West Bend Insurance Company

Surety

By: Amy Winters

Attorney-in Fact Amy Winters

1900 South 18th Avenue, West Bend, WI 53095

Mailing Address

Directconnect@wbmi.com

Claim submission website or email address

(Accompany this Bond with Surety Power of Attorney.)

ACKNOWLEDGEMENT OF REPRESENTATIVE OF PRINCIPAL

STATE OF OKLAHOMA, COUNTY OF Payne, SS:

Before me, the undersigned, a Notary Public in and for said County and State, on this September 25 day of September, 2025 personally appeared Angus MacIntyre, to me known to be the identical person(s) who executed the foregoing subdivision bond and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

WITNESS my hand and seal the day and year last above written.



Priscilla A. Hull
Notary Public



Bond No. 2297320

POWER OF ATTORNEY

Know all men by these Presents, that West Bend Insurance Company (formerly known as West Bend Mutual Insurance Company prior to 1/1/2024), a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Barry Herring, Neleigh Herring, Amy Winters

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: Thirty Million Dollars (\$30,000,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Insurance Company by unanimous consent resolution effective the 1st day of January 2024.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Insurance Company may appoint by written certificate Attorneys-In-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

Any reference to West Bend Mutual Insurance Company in any Bond and all continuations thereof shall be considered a reference to West Bend Insurance Company.

In witness whereof, West Bend Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of January 2024.

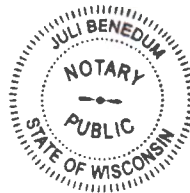
Attest Christopher C. Zwygart
Christopher C. Zwygart
Secretary



Robert J. Jacques
Robert J. Jacques
President

State of Wisconsin
County of Washington

On the 1st day of January 2024, before me personally came Robert Jacques, to me known being by duly sworn, did depose and say that he is the President of West Bend Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.



Juli Benedum
Lead Corporate Attorney
Notary Public, Washington Co., WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 9th day of September, 2025



Christopher C. Zwygart
Christopher C. Zwygart
Secretary

**STILLWATER COMMUNITY DEVELOPMENT
SUBDIVISION MAINTENANCE BOND**

Subdivision Name: Park Valley Section 3

Plat Case Number: IMP-23-07

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, MK Excavation, LLC, as PRINCIPAL, and West Bend Insurance Company, a corporate entity organized under the Laws of the State of Wisconsin and authorized and licensed to do business within the State of Oklahoma, as SURETY, are hereby held and firmly bound unto the CITY OF STILLWATER, OKLAHOMA, a Municipal Corporation hereinafter called CITY, in the sum of Three Hundred Fifty-Eight Thousand Forty-Six Dollars and Fifty Cents Dollars (\$ 358,046.50), 100% of the construction cost of all improvements and utilities, for the payment whereof well and truly to be made, the PRINCIPAL and SURETY herein hereby bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the subject improvements and utilities are related to the above-named subdivision located on a tract of land described as follows (insert legal description):

Park Valley Section 3 - Water - Case # IMP-23-07

THE CONDITION OF THIS BOND is such that the said Principal and Surety herein named do hereby agree and bind themselves unto and guarantee the City of Stillwater that all streets, water, sewer, stormwater and other infrastructure improvements and utilities dedicated to the City of Stillwater within said subdivision were OR WILL BE constructed by Principal with materials and in such a manner that the same shall endure without need of any repair whatsoever for a period of one (1) year from and after the formal acceptance of said improvements and utilities by the City of Stillwater, and that all the expense of said Principal and/or Surety, all needed repairs within said period of one (1) year shall be promptly repaired, within ten (10) days after notice to said Principal by letter deposited in the United States mail, addressed to said Principal at PO Box 863
Stillwater, OK 74076 and copied to said Surety; and it being further agreed that upon the neglect, failure or refusal of the Principal to make any needed repairs upon said infrastructure improvements or utilities or any work connected therewith within the aforesaid ten (10) day period or other City negotiated period, the said Principal and Surety shall jointly and severally be liable to the City of Stillwater, Oklahoma, for the costs and expenses of making such repairs or making good such defects or imperfections.

NOW, THEREFORE, if the said Principal and Surety shall faithfully and securely keep and perform all the obligations herein provided to be kept and performed by them, or either of them, then this obligation shall be null and void and of no force and effect, otherwise to be and remain in full force and effect at all times.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK.

IN WITNESS WHEREOF, the said Principal has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

MK Excavation, LLC

Principal

By:

Title

IN WITNESS WHEREOF, the said Surety has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

West Bend Insurance Company

Surety

By:

Attorney-in Fact

Amy Winters

1900 South 18th Avenue, West Bend, WI 53095

Mailing Address

Directconnect@wbmi.com

Claim submission website or email address

(Accompany this Bond with Surety Power of Attorney.)

ACKNOWLEDGEMENT OF REPRESENTATIVE OF PRINCIPAL

STATE OF OKLAHOMA, COUNTY OF Payne, SS:

Before me, the undersigned, a Notary Public in and for said County and State, on this 9th day of September, 2025 personally appeared Angus MacIntyre, to me known to be the identical person(s) who executed the foregoing subdivision bond and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

WITNESS my hand and seal the day and year last above written.



Notary Public



Bond No. 2297320

POWER OF ATTORNEY

Know all men by these Presents, that West Bend Insurance Company (formerly known as West Bend Mutual Insurance Company prior to 1/1/2024), a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Barry Herring, Neleigh Herring, Amy Winters

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: Thirty Million Dollars (\$30,000,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Insurance Company by unanimous consent resolution effective the 1st day of January 2024.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Insurance Company may appoint by written certificate Attorneys-In-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

Any reference to West Bend Mutual Insurance Company in any Bond and all continuations thereof shall be considered a reference to West Bend Insurance Company.

In witness whereof, West Bend Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of January 2024.

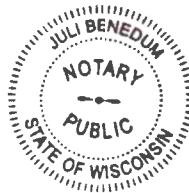
Attest Christopher C. Zwygart
Christopher C. Zwygart
Secretary



Robert J. Jacques
Robert J. Jacques
President

State of Wisconsin
County of Washington

On the 1st day of January 2024, before me personally came Robert Jacques, to me known being by duly sworn, did depose and say that he is the President of West Bend Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.



Juli Benedum
Lead Corporate Attorney
Notary Public, Washington Co., WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 9th day of September, 2025



Christopher C. Zwygart
Christopher C. Zwygart
Secretary

**STILLWATER COMMUNITY DEVELOPMENT
SUBDIVISION MAINTENANCE BOND**

Subdivision Name: Park Valley Section 3

Plat Case Number: IMP-23-07

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, MK Excavation, LLC, as PRINCIPAL, and West Bend Insurance Company, a corporate entity organized under the Laws of the State of Wisconsin and authorized and licensed to do business within the State of Oklahoma, as SURETY, are hereby held and firmly bound unto the CITY OF STILLWATER, OKLAHOMA, a Municipal Corporation hereinafter called CITY, in the sum of Three Hundred Nineteen Thousand Eight Hundred Thirty-Seven Dollars and Zero Cents Dollars (\$ 319,837.00), 100% of the construction cost of all improvements and utilities, for the payment whereof well and truly to be made, the PRINCIPAL and SURETY herein hereby bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the subject improvements and utilities are related to the above-named subdivision located on a tract of land described as follows (insert legal description):

Park Valley Section 3 - Sewer - Case # IMP-23-07

THE CONDITION OF THIS BOND is such that the said Principal and Surety herein named do hereby agree and bind themselves unto and guarantee the City of Stillwater that all streets, water, sewer, stormwater and other infrastructure improvements and utilities dedicated to the City of Stillwater within said subdivision were OR WILL BE constructed by Principal with materials and in such a manner that the same shall endure without need of any repair whatsoever for a period of one (1) year from and after the formal acceptance of said improvements and utilities by the City of Stillwater, and that all the expense of said Principal and/or Surety, all needed repairs within said period of one (1) year shall be promptly repaired, within ten (10) days after notice to said Principal by letter deposited in the United States mail, addressed to said Principal at PO Box 863 Stillwater, OK 74076 and copied to said Surety; and it being further agreed that upon the neglect, failure or refusal of the Principal to make any needed repairs upon said infrastructure improvements or utilities or any work connected therewith within the aforesaid ten (10) day period or other City negotiated period, the said Principal and Surety shall jointly and severally be liable to the City of Stillwater, Oklahoma, for the costs and expenses of making such repairs or making good such defects or imperfections.

NOW, THEREFORE, if the said Principal and Surety shall faithfully and securely keep and perform all the obligations herein provided to be kept and performed by them, or either of them, then this obligation shall be null and void and of no force and effect, otherwise to be and remain in full force and effect at all times.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK.

IN WITNESS WHEREOF, the said Principal has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

MK Excavation, LLC

Principal

By: Angus MacIntyre

Title Project Manager

IN WITNESS WHEREOF, the said Surety has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

West Bend Insurance Company

Surety

By: Amy Winters

Attorney-in Fact

Amy Winters

1900 South 18th Avenue, West Bend, WI 53095

Mailing Address

Directconnect@wbmi.com

Claim submission website or email address

(Accompany this Bond with Surety Power of Attorney.)

ACKNOWLEDGEMENT OF REPRESENTATIVE OF PRINCIPAL

STATE OF OKLAHOMA, COUNTY OF Payne, SS:

Before me, the undersigned, a Notary Public in and for said County and State, on this 9th day of September, 2025 personally appeared Angus MacIntyre, to me known to be the identical person(s) who executed the foregoing subdivision bond and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

WITNESS my hand and seal the day and year last above written.

Priscilla A. Hull
Notary Public





Bond No. 2297318

POWER OF ATTORNEY

Know all men by these Presents, that West Bend Insurance Company (formerly known as West Bend Mutual Insurance Company prior to 1/1/2024), a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Barry Herring, Neleigh Herring, Amy Winters

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: Thirty Million Dollars (\$30,000,000)

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Insurance Company by unanimous consent resolution effective the 1st day of January 2024.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Insurance Company may appoint by written certificate Attorneys-In-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

Any reference to West Bend Mutual Insurance Company in any Bond and all continuations thereof shall be considered a reference to West Bend Insurance Company.

In witness whereof, West Bend Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of January 2024.

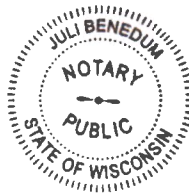
Attest Christopher C. Zwiygart
Christopher C. Zwiygart
Secretary



Robert J. Jacques
Robert J. Jacques
President

State of Wisconsin
County of Washington

On the 1st day of January 2024, before me personally came Robert Jacques, to me known being by duly sworn, did depose and say that he is the President of West Bend Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.



Julie Benedum
Lead Corporate Attorney
Notary Public, Washington Co., WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 9th day of September, 2025



Christopher C. Zwiygart
Christopher C. Zwiygart
Secretary

**STILLWATER COMMUNITY DEVELOPMENT
SUBDIVISION MAINTENANCE BOND**

Subdivision Name: Park Valley Section 3

Plat Case Number: IMP-23-07

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, MK Excavation, LLC, as PRINCIPAL, and West Bend Insurance Company, a corporate entity organized under the Laws of the State of Wisconsin and authorized and licensed to do business within the State of Oklahoma, as SURETY, are hereby held and firmly bound unto the CITY OF STILLWATER, OKLAHOMA, a Municipal Corporation hereinafter called CITY, in the sum of Eight Hundred Seven Thousand Eight Hundred Twenty-Three Dollars and Zero Cents Dollars (\$ 807,823.00), 100% of the construction cost of all improvements and utilities, for the payment whereof well and truly to be made, the PRINCIPAL and SURETY herein hereby bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the subject improvements and utilities are related to the above-named subdivision located on a tract of land described as follows (insert legal description):

Park Valley Section 3 - Paving - Case # IMP-23-07

THE CONDITION OF THIS BOND is such that the said Principal and Surety herein named do hereby agree and bind themselves unto and guarantee the City of Stillwater that all streets, water, sewer, stormwater and other infrastructure improvements and utilities dedicated to the City of Stillwater within said subdivision were OR WILL BE constructed by Principal with materials and in such a manner that the same shall endure without need of any repair whatsoever for a period of one (1) year from and after the formal acceptance of said improvements and utilities by the City of Stillwater, and that all the expense of said Principal and/or Surety, all needed repairs within said period of one (1) year shall be promptly repaired, within ten (10) days after notice to said Principal by letter deposited in the United States mail, addressed to said Principal at PO Box 863 Stillwater, OK 74076 and copied to said Surety; and it being further agreed that upon the neglect, failure or refusal of the Principal to make any needed repairs upon said infrastructure improvements or utilities or any work connected therewith within the aforesaid ten (10) day period or other City negotiated period, the said Principal and Surety shall jointly and severally be liable to the City of Stillwater, Oklahoma, for the costs and expenses of making such repairs or making good such defects or imperfections.

NOW, THEREFORE, if the said Principal and Surety shall faithfully and securely keep and perform all the obligations herein provided to be kept and performed by them, or either of them, then this obligation shall be null and void and of no force and effect, otherwise to be and remain in full force and effect at all times.

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MK Excavation, LLC

Principal

By: Angus MacIntyre

Title Project Manager

IN WITNESS WHEREOF, the said Surety has executed in its name by its duly authorized officers and delivered this bond this 9th day of September 2025.

West Bend Insurance Company

Surety

By: Amy Winters

Attorney-in Fact Amy Winters

1900 South 18th Avenue, West Bend, WI 53095

Mailing Address

Directconnect@wbmi.com

Claim submission website or email address

(Accompany this Bond with Surety Power of Attorney.)

ACKNOWLEDGEMENT OF REPRESENTATIVE OF PRINCIPAL

STATE OF OKLAHOMA, COUNTY OF Payne, SS:

Before me, the undersigned, a Notary Public in and for said County and State, on this 9th day of September, 2025 personally appeared Angus MacIntyre, to me known to be the identical person(s) who executed the foregoing subdivision bond and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

WITNESS my hand and seal the day and year last above written.

Priscilla A. Hull
Notary Public





Bond No. 2297321

POWER OF ATTORNEY

Know all men by these Presents, that West Bend Insurance Company (formerly known as West Bend Mutual Insurance Company prior to 1/1/2024), a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Barry Herring, Neleigh Herring, Amy Winters

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: Thirty Million Dollars (\$30,000,000)

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Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Insurance Company may appoint by written certificate Attorneys-In-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

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In witness whereof, West Bend Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of January 2024.

Attest

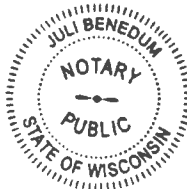
Christopher C. Zwygart
Christopher C. Zwygart
Secretary



Robert J. Jacques
Robert J. Jacques
President

State of Wisconsin
County of Washington

On the 1st day of January 2024, before me personally came Robert Jacques, to me known being by duly sworn, did depose and say that he is the President of West Bend Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.



Juli Benedum
Lead Corporate Attorney
Notary Public, Washington Co., WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this 9th day of September, 2025



Christopher C. Zwygart
Christopher C. Zwygart
Secretary

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	3.h. CC-25-124
Previous/Related Action:	
Background/Issue:	• Tonkawa Tribe of Oklahoma owns property at 707 E. Airport Road. • This request is for acceptance of a water easement that serves the new Hub II entertainment development. • The water easement dedication consists of 4,568 square feet (.105 acres) more or less.
Proposal/Solution:	• Staff recommends acceptance of the water easement.
Financial Source/Impact:	• There is no additional financial impact from the acceptance of this easement.
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	Motion to accept the water easement and authorize the Mayor to execute the document
Prepared By:	Henry Bibelheimer, Senior Planner
Reviewed By:	David Barth Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Waterline Easement Dedication HUBII

WATER LINE EASEMENT

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned, Tonkawa Tribe of Oklahoma, certifies that they own and possess all rights, title, and interest to the following described real property situated in Payne County, State of Oklahoma, to-wit:

See attached Exhibit A

and further that the undersigned, in consideration of the sum of One Dollar (\$1.00), in hand paid and other good and valuable consideration, for them, their heirs, successors, executors, administrators, and assigns do hereby grant, bargain, sell, and convey unto the City of Stillwater, Oklahoma, a Municipal Corporation, its successors and assigns, an easement for the installation, operation and maintenance of a water line(s) through, over, under, and across the portions of the above-described property, together with the right of ingress and egress to and from same, for the purpose heretofore stated.

See attached Exhibit B

The easement contains 4,568 square feet or 0.105 acres more or less and is subject to all recorded easements and rights of way thereof.

Except as herein granted, the grantors shall continue to have the full use and enjoyment of the properties herein granted or described for appropriate purposes. At no time shall the grantors commit a use, occupation or enjoyment thereof that might cause a hazardous condition and no building, structure or obstruction shall be located or constructed on said easement by the grantors, their successors or assigns, nor shall the grantors allow said easement to be encumbered in any way so that the City of Stillwater shall not be afforded access to said water line(s) at any and all times.

Russell Martin, President

STATE OF OKLAHOMA)
) ss.
COUNTY OF PAYNE)

Before me, a Notary Public in and for said County and State on this ____ day of _____, 2025, personally appeared, Russell Martin, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument and acknowledged to me that he/she/they executed the same as his/her/their free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.

NOTARY PUBLIC

My Commission Expires:
My Commission Number:

(SEAL)

STATE OF OKLAHOMA)
) ss.
COUNTY OF PAYNE)

NOW, on this_____ day of _____, 2025 , the City Council of the City of Stillwater, State of Oklahoma, a municipal corporation, acting for and in behalf of said municipal corporation, during regular session, does hereby approve and accept from the named Grantor this delivered water line easement and directs the Mayor and Clerk of said City of Stillwater to indicate the same by their signatures and seal of the City of Stillwater, State of Oklahoma.

WILLIAM H. JOYCE, MAYOR
CITY OF STILLWATER, OKLAHOMA

(SEAL)

ATTEST:

TERESA KADAVY, CITY CLERK
CITY OF STILLWATER, OKLAHOMA

Approved as to form and legality this_____ day of _____, 2025 .

KIMBERLY CARNLEY, CITY ATTORNEY
CITY OF STILLWATER, OKLAHOMA

EXHIBIT "A"

Legal Description

A tract of land that is a part of the West half of the Northwest Quarter (W/2 of the NW/4) of Section One (1), Township Nineteen (19) North, Range Two (2) East of the Indian Meridian, Payne County, Oklahoma, more particularly described as follows:

Commencing at the Northwest corner of the Northwest Quarter (NW/4) of said Section 1; Thence S89°58'48"E, along the North line of said Northwest Quarter (NW/4) a distance of 87.43 feet;

Thence, S00°01'12"W, perpendicular to the North line of said Northwest Quarter (NW/4), a distance of 80.00 feet, to a point that is both 80.00 feet South of the North line of said Northwest Quarter (NW/4) and 87.00 feet East of the West line of said Northwest Quarter (NW/4), said point being the Point of Beginning;

Thence, S89°58'48"E, parallel with and 80.00 feet South of the North line of said Northwest Quarter (NW/4), and along the South line of a parcel Deeded by Warranty Deed to The State of Oklahoma in Book 204 at page 425, as recorded in the offices of the Payne County Clerk, a distance of 1139.22 feet, to a point on the West line of that Deed to The Atchison, Topeka and Santa Fe Railway Company recorded as a Warranty Deed in Book 19 at page 315 in the offices of the Payne County Clerk;

Thence, along a non-tangent curve to the left, and the West line of said Railway, having a tangent bearing of S41°50'04"W, a radius of 2978.97 feet, a central angle of 14°17'30", and an arc length of 743.06 feet;

Thence S27°32'34"W, continuing along the West line of said Railway, a distance of 937.56 feet, to a point on an Easement for Railroad Spur Recorded in Book 176 at page 381 in the offices of the Payne County Clerk;

Thence, along a non-tangent curve to the right, and along the North line of said Easement, having a tangent bearing of S37°28'30"W, a radius of 836.07 feet, a central angle of 24°52'18", and an arc length of 362.93 feet, to a point that is 87.00 feet East of the West line of said Northwest Quarter (NW/4), and on the East line of Tract No. 15 in the Report of Commissioners giving Fee Simple Title to the City of Stillwater as recorded in Book 178 at page 42 in the offices of the Payne County Clerk;

Thence, N00°17'16"W, parallel with and 87.00 feet East of the West line of said Northwest Quarter (NW/4), and along the East line of said Tract No. 15, and continuing along Tract No. 16 in the Report of Commissioners giving Fee Simple Title to the City of Stillwater as recorded in Book 178 at page 42 in the offices of the Payne County Clerk, a distance of 1673.02 feet, to the Point of Beginning.

Being Payne County Assessor #'s 600084923 (Parcel ID 19N02E-01-4-SZ999-000-7454) and 600089780 (Parcel ID 19N02E-01-4-SZ999-000-7458)

PROPOSED DESCRIPTION

For water line purposes, a tract of land lying in the Northwest Quarter (NW/4) of Section One (1), Township Nineteen (19) North, Range Two (2) East of the Indian Base and Meridian (I.B. & M.), Payne County, Oklahoma, being more particularly described by Darrel Ray Mason OKLS1690 on May 14, 2025 as follows:

A 20.00 foot wide strip of land having 10.00 feet to both sides of the following described centerline:

COMMENCING at the Northwest Corner of the Northwest Quarter (NW/4) of said Section One (1); Thence along the North line of said Northwest Quarter (NW/4), as the Basis of Bearings N 89° 27' 26" E a distance of 381.61 feet; Thence departing said North line S 00° 55' 06" E, a distance of 80.00 feet to a point on the South Right-of-Way line for Airport Road also being the **POINT OF BEGINNING**; Thence S 00° 55' 06" E, a distance of 228.43 feet to the **POINT OF TERMINATION**, being S 51° 44' 41" E, a distance 492.23 feet from the Northwest Corner of the Northwest Quarter (NW/4) of said Section One (1), with sidelines to be shortened or extended as to terminate on the property line.

Said tract contains 4,568 sq. ft. or 0.105 acres, more or less.

Basis of Bearings:

N89°27'26"E along North line said NW/4 SEC. 1-T19N-R2E

Grid, based on NAD 83 Oklahoma State Plane Coordinate System North Zone

I, Darrel Ray Mason, a Licensed Professional Land Surveyor in the State of Oklahoma, certify that the attached description is a true representation of the property described and meets the minimum technical standards for land surveying of the State of Oklahoma.



5/15/2025

Darrel Ray Mason

Date

OK PLS NO. 1690 - Expires August 31, 2026

OK CA NO. 2483 - Expires June 30, 2025

PROJECT NO: 023-04143

DRAWN BY: TLM

DATE: 05.14.2025

PROPOSED WATER
LINE EXHIBIT

olsson

11600 Broadway Extension
Suite 300
Oklahoma City, OK 73114

olsson.com
TEL 405.242.6600
Olsson - Survey
Oklahoma COA #2483

EXHIBIT

B

EXHIBIT

POINT OF COMMENCING

NORTHWEST CORNER OF
THE NORTHWEST QUARTER OF
SECTION 1, T-19-N, R-2-E

N89°27'26"E 381.61'
(BASIS OF BEARINGS)

80.00'
RIGHT
OF
WAY

POINT OF BEGINNING

20.00' PROPOSED PERMANENT
WATER LINE EASEMENT
4,568 SQ. FT. OR 0.105 AC ±

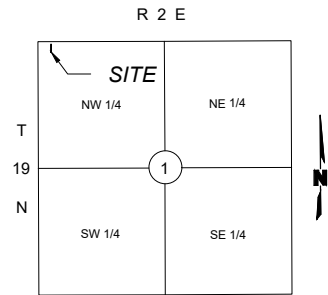
S00°55'06"E 228.43'

S51°44'41"E 492.23'
(WHENCE LINE)

POINT OF TERMINATION

N

0' 25' 50'
SCALE IN FEET



LOCATION MAP
NOT TO SCALE

BASIS OF BEARING
Oklahoma State Plane NAD83
Oklahoma North Zone
N89°27'26"E
Along the North Line of said NW/4
1-T19N-R2E

DISCLAIMER: The proposed boundary and associated description depicted on this exhibit is meant for informational purposes only and not for conveyance of property as some lines may change due to current and future design projects. This exhibit is not a boundary survey and does not meet the requirements for a property boundary survey in the State of Oklahoma and should not be used to locate or mark property lines or convey property. Any use of this exhibit other than the above stated intent is the responsibility of that party and not the responsibility of Olsson or the professional land surveyor. No boundary corners were set as a part of this survey.

PROJECT NO: 023-04143

DRAWN BY: TLM

DATE: 05.14.2025

PROPOSED WATER
LINE EXHIBIT

olsson

11600 Broadway Extension
Suite 300
Oklahoma City, OK 73114
olsson.com
TEL 405.242.6600
Olsson - Survey
Oklahoma COA #2483

EXHIBIT

B

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	3.i. CC-25-125
Previous/Related Action:	CC-25-117
Background/Issue:	The Tonkawa Tribe of Oklahoma is building The Hub II Entertainment Center at 707 E. Airport Road. A portion of the facility includes an awning and associated fixtures that will span above a buried waterline that is within a general utility easement. A portion of the awning support system is within the 30-foot general utility easement. The developer requested closing the general utility easement and is providing a 20-foot waterline easement that will maintain necessary access for Water Utilities while eliminating the encroachment of the awning support system. Closing of the general utility easement was approved by Council at their August 18, 2025 meeting and acceptance of the waterline easement is on this agenda. The awning will span both the 20-foot waterline easement and the closed 30-foot utility easement (until it is vacated) for a length of 34.5 feet. The clear height distance from the awning light fixtures and the ground is 17 feet 9 inches, which is acceptable for Water Utilities to maintain the waterline.
Proposal/Solution:	SEC.23-83 (a) (3) states that no permanent structure shall be constructed within the boundary of a utility easement. City Staff and the developer have negotiated an encroachment agreement and release of liability, which will allow the awning and associated fixtures to be constructed over the easement area with the requirement that the encroachment area be free and clear of all obstructions up to 17 feet 9 inches above the ground level.
Financial Source/Impact:	None
Related Strategic Priority:	#2 MOTIVATED MANAGEMENT #4 CONNECTED SPACES
Recommended Action/Motion:	Staff recommends a motion to approve the Encroachment Agreement and Release of Liability with the Tonkawa Tribe of Oklahoma for an awning and associated fixtures within a utility easement located on property addressed as 707 E. Airport Road.
Prepared By:	Henry Bibelheimer, Senior Planner
Reviewed By:	David Barth Brady Moore Teresa Kadavy

Submitted By:

Brady Moore, City Manager

Attachments

1. Encroachment Agreement and Release of Reliability (EARL) Document

ENCROACHMENT AGREEMENT AND RELEASE OF LIABILITY
(Permission to Encroach)

This Encroachment Agreement and Release of Liability for an encroachment on a Public Property/Easement/Right-of-Way is entered into by and between the City of Stillwater, an Oklahoma municipality (City), and Tonkawa Tribe of Oklahoma, (Owner).

The City owns public property, an easement and/or right-of-way across, upon or adjacent to Owner's property. Owner's property is more particularly described as:

A tract of land that is a part of the West Half of the Northwest Quarter (W/2 NW/4) of Section One (1), Township Nineteen (19) North, Range Two (2) East of the Indian Meridian, Payne County, Oklahoma, more particularly described as follows: Commencing at the Northwest corner (NW/Cor) of the Northwest Quarter (NW/4) of said Section One (1); THENCE South 89°58'48" East, along the North line of said Northwest Quarter (NW/4) a distance of 87.43 feet; THENCE South 00°01'12" West, perpendicular to the North line of said Northwest Quarter (NW/4), a distance of 80.00 feet, to a point that is both 80.00 feet South of the North line of said Northwest Quarter (NW/4) and 87.00 feet East of the West line of said Northwest Quarter (NW/4), said point being the Point of Beginning; THENCE, South 89°58'48" East, parallel with and 80.00 feet South of the North line of said Northwest Quarter (NW/4), and along the South line of a parcel deeded by Warranty Deed to The State of Oklahoma in Book 204 at page 425, as recorded in the offices of the Payne County Clerk, a distance of 1139.22 feet, to a point on the West line of that Deed to The Atchison, Topeka and Santa Fe Railway Company recorded as a Warranty Deed in Book 19 at page 315 in the offices of the Payne County Clerk; THENCE along a non-tangent curve to the left, and the West line of said Railway, having a tangent bearing of South 41°50'04" West, a radius of 2978.97 feet, a central angle of 14°17'30", and an arc length of 743.06 feet; THENCE South 27°32'34" West, continuing along the West line of said Railway, a distance of 937.56 feet, to a point on an Easement for Railroad Spur Recorded in Book 176 at page 381 in the offices of the Payne County Clerk; THENCE along a non-tangent curve to the right, and along the North line of said Easement, having a tangent bearing of South 37°28'30" West, a radius of 836.07 feet, a central angle of 24°52'18", and an arc length of 362.93 feet, to a point that is 87.00 feet East of the West line of said Northwest Quarter (NW/4), and on the East line of Tract No. 15 in the Report of Commissioners giving Fee Simple Title to the City of Stillwater as recorded in Book 178 at page 42 in the offices of the Payne County Clerk; THENCE North 00°17'16" West, parallel with and 87.00 feet East of the West line of said Northwest Quarter (NW/4), and along the East line of said Tract No. 15, and continuing along Tract No. 16 in the Report of Commissioners giving Fee Simple Title to the City of Stillwater as recorded in Book 178 at page 42 in the offices of the Payne County Clerk, a distance of 1673.02 feet, to the Point of Beginning.

Owner requests permission to construct and maintain structures and other encroachments over a portion of a public utility easement, as shown in Exhibit B, namely 1) a 34'6" wide awning and associated fixtures a minimum of 17'9" above ground level, 2) a pillar located approximately two (2) feet into the east side of the 30' U/E, and 3) twelve (12) bollards located along a line 10 feet west of the eastern boundary of said utility easement. The Encroachment Area is described as:

See attached Exhibit A: Legal Description and MAP of the Encroachment Area
and
Exhibit B: Schematic representation of the Encroachment Area

The City grants to Owner permission to construct and maintain the requested structure or encroachment over and above the above-described portion of public property/easement/right-of-way.

The Owner shall not construct or permit additional encroachments upon the public property/easement/right-of-way, and shall not alter, improve, replace or add to the permitted encroachment without prior written permission of the City. The Owner shall ensure the encroachment area between the ground and 17'9" above the ground remains free and clear of all obstructions not authorized herein.

The City reserves the right to require Owner to remove all encroachments from the applicable public property/easement/right-of-way at any time in the event that the encroached upon public property/easement/right-of-way is required, in the sole judgment of the City, to be used for public purposes.

In consideration of the City's agreement to permit the requested encroachment upon the applicable public property/easement/right-of-way, Owner agrees, on behalf of Owner, Owner's family and heirs, agents, devisees, successors, grantees, and assigns (collectively referred to as "Owner") to **waive any and all claims, causes of action, for damages of any kind or nature, including but not limited to any foreseen or unforeseen personal injury (including death), property damages (including loss of use), or other losses or damages** against the City of Stillwater, Oklahoma, its employees, officers, agents or assigns, which may arise out of or in connection with any aspect of the encroachment upon the above described public property/easement/right-of-way.

In consideration of the City's agreement to permit the requested encroachment upon the applicable public property/easement/right-of-way, Owner also agrees to **indemnify, defend (at the City's option), and hold harmless** the City, its employees, officials, agents, representatives and volunteers **from and against any and all causes of action (whether groundless or not), losses, liabilities, damages, injuries (including death), property damage (including loss of use), claims, liens, judgments, costs, expenses, suits, actions, or proceedings and reasonable attorney's fees, and actual damages of any kind or nature** directly or indirectly arising out of or in connection with the encroachment upon the above described public property/easement/right-of-way.

In consideration of the City's agreement to permit the requested encroachment upon the applicable public property/easement/right-of-way, Owner also agrees to **reimburse City for any direct or indirect costs or expenses** that the City may incur as a direct or indirect result of any encroachment upon the above-described property. The presence or absence of any insurance shall not be construed as a limitation on the duties or obligations of Owner under this Agreement.

Owner shall obtain release agreements as required by all other applicable utilities companies, and shall comply with all local, state, and federal regulations and laws which may be applicable to Owner's encroachment upon the above property/easement/right-of-way.

OWNER UNDERSTANDS THE PERSONAL, PROPERTY, AND/OR FINANCIAL RISKS ASSOCIATED WITH THIS AGREEMENT, AND OWNER AGREES TO ACCEPT THESE RISKS KNOWINGLY AND VOLUNTARILY.

Owner seeks this agreement with the City voluntarily, and acknowledges that no promises, agreements or other inducements have been made to Owner. Owner understands that the City of

Stillwater, Oklahoma will rely on this statement, the terms of this Agreement are contractual in nature, and this Agreement is specifically designed to protect the City of Stillwater, Oklahoma, its citizens, employees, officers, agents, and assigns.

The Owner shall not assign this agreement without the prior written consent of the City, which shall not be unreasonably withheld.

I HAVE READ THE ABOVE STATEMENT AND I UNDERSTAND IT. I HAVE SOUGHT AND OBTAINED ANY AND ALL LEGAL ADVICE I NEEDED OR MAY HAVE NEEDED PRIOR TO SIGNING THIS DOCUMENT, AND I SIGN THIS DOCUMENT FREELY AND VOLUNTARILY.

Property Owner's Full Legal Name

Property Owner's Signature

Title/Office of Signatory

State of Oklahoma)
) ss.
County of Payne)

On this ____ day of _____, 20____ before me personally appeared _____, known to me to be the person(s) named herein and who executed the foregoing **ENCROACHMENT AGREEMENT AND RELEASE OF LIABILITY**, and who acknowledged to me that he/she/they knowingly and voluntarily executed the same.

My Commission Expires

Notary Public

APPROVED by the City Council of the City of Stillwater, Oklahoma on: _____, 2025.

CITY OF STILLWATER, a municipal corporation

By: _____
 Mayor

ATTEST:

APPROVED:

City Clerk

City Attorney

EXHIBIT A - DESCRIPTION OF ENCROACHMENT AREA

A tract of land lying in the Northwest Quarter (NW/4) of Section One (1), Township Nineteen (19) North, Range Two (2) East of the Indian Base and Meridian (I.B. & M.), Payne County, Oklahoma, being more particularly described by Darrel Ray Mason OKLS1690 on August 27, 2025 as follows:

COMMENCING at the Northwest Corner of the Northwest Quarter (NW/4) of said Section One (1); Thence along the North line of said Northwest Quarter (NW/4), as the Basis of Bearings, N 89° 27' 26" E a distance of 371.61 feet; Thence departing said North line S 00° 55' 06" E, a distance of 80.00 feet to a point on the South Right-of-Way line for Airport Road also being a point on the Northwest corner of an existing 30.00' Utility Easement recorded in Book 2491, Page 602; Thence along the West line of said easement S 00° 55' 06" E, a distance of 157.50 feet also being the **POINT OF BEGINNING**; Thence departing said West line N 88° 25' 24" E, a distance of 30.00 feet to the East line of said easement; Thence South along East line S 00° 55' 06" E, a distance of 70.94 feet; Thence departing said East line S 88° 25' 24" W, a distance of 30.00 feet to a point on the West line of said easement; Thence along said West line N 00° 55' 06" W 70.94 feet to the **POINT OF BEGINNING**.

Said tract contains 2,128 sq. ft. or 0.049 acres, more or less.

Basis of Bearings:

N89°27'26"E along North line said NW/4 SEC. 1-T19N-R2E

Grid, based on NAD 83 Oklahoma State Plane Coordinate System North Zone

I, Darrel Ray Mason, a Licensed Professional Land Surveyor in the State of Oklahoma, certify that the attached description is a true representation of the property described and meets the minimum technical standards for land surveying of the State of Oklahoma.



9/02/2025

Darrel Ray Mason

Date

OK PLS NO. 1690 - Expires August 31, 2026

OK CA NO. 2483 - Expires June 30, 2027

PROJECT NO: 023-04143

DRAWN BY: TLM

DATE: 08.27.2025

ENCROACHMENT
AGREEMENT - 30.00'
UTILITY EASEMENT

olsson

11600 Broadway Extension
Suite 300
Oklahoma City, OK 73114

olsson.com
TEL 405.242.6600
Olsson - Survey
Oklahoma COA #2483

EXHIBIT

A

EXHIBIT A

POINT OF COMMENCING

NORTHWEST CORNER OF
THE NORTHWEST QUARTER OF
SECTION 1, T-19-N, R-2-E

N89°27'26"E 371.61'
(BASIS OF BEARINGS)

80.00'
RIGHT
OF
WAY

S00°55'06"E 80.00'

S00°55'06"E 157.50'

N88°25'24"E 30.00'

POINT OF BEGINNING

CANOPY ENCROACHMENT
AGREEMENT AREA
2,128 sq. ft. or 0.049 ac. ±

N00°55'06"W 70.94'

30.00'

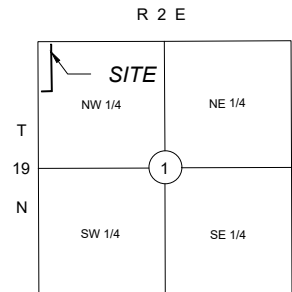
S00°55'06"E 70.94'

S88°25'24"W 30.00'

EXISTING 30.00' UTILITY EASEMENT
BK. 2491, PG. 602

N

0' 25' 50'
SCALE IN FEET



LOCATION MAP
NOT TO SCALE

BASIS OF BEARING
Oklahoma State Plane NAD83
Oklahoma North Zone
N89°27'26"E
Along the North Line of said NW/4
1-T19N-R2E

DISCLAIMER: The proposed boundary and associated description depicted on this exhibit is meant for informational purposes only and not for conveyance of property as some lines may change due to current and future design projects. This exhibit is not a boundary survey and does not meet the requirements for a property boundary survey in the State of Oklahoma and should not be used to locate or mark property lines or convey property. Any use of this exhibit other than the above stated intent is the responsibility of that party and not the responsibility of Olsson or the professional land surveyor. No boundary corners were set as a part of this survey.

PROJECT NO: 023-04143

DRAWN BY: TLM

DATE: 08.27.2025

ENCROACHMENT
AGREEMENT - 30.00'
UTILITY EASEMENT

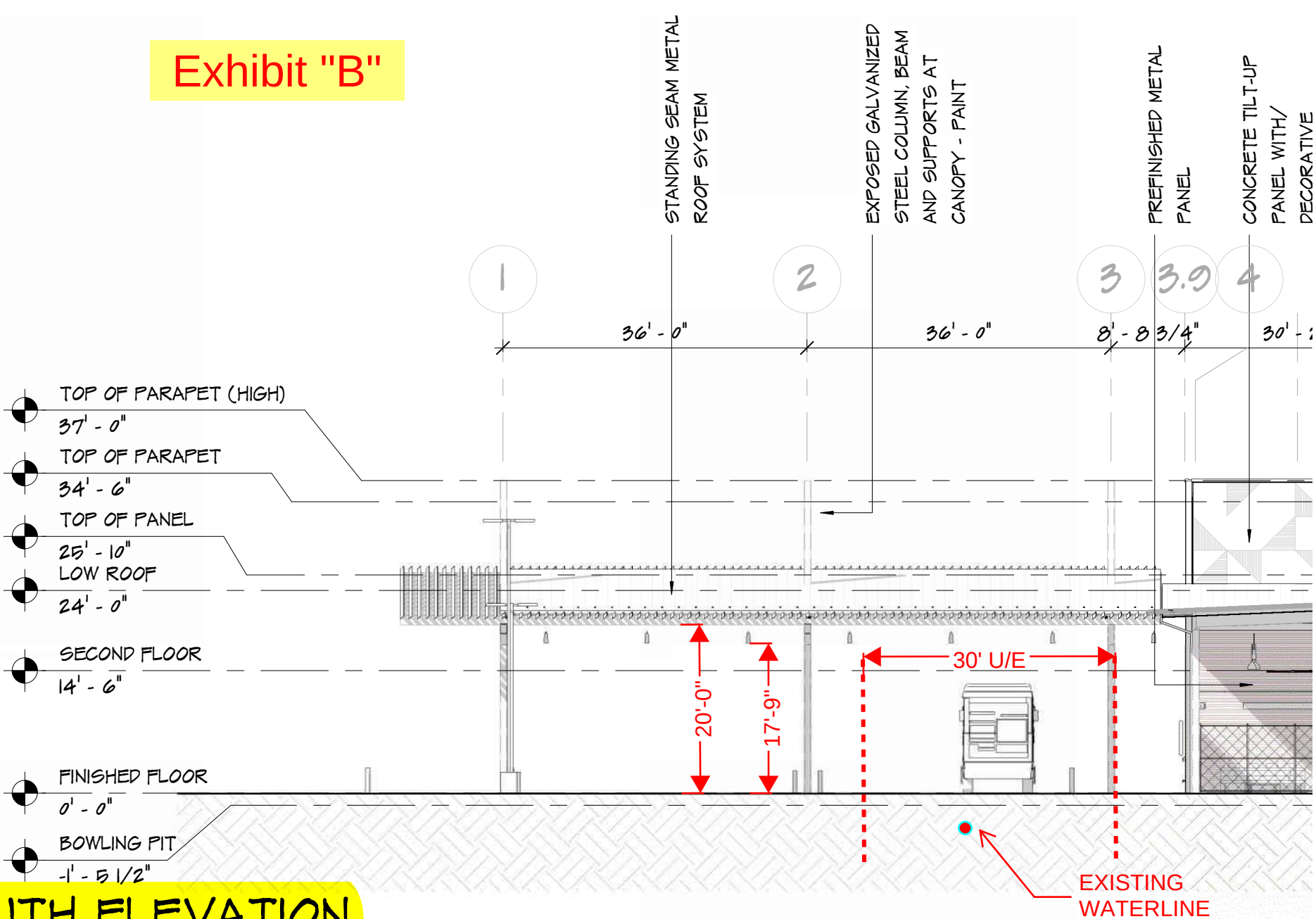
olsson

11600 Broadway Extension
Suite 300
Oklahoma City, OK 73114
olsson.com
TEL 405.242.6600
Olsson - Survey
Oklahoma COA #2483

EXHIBIT

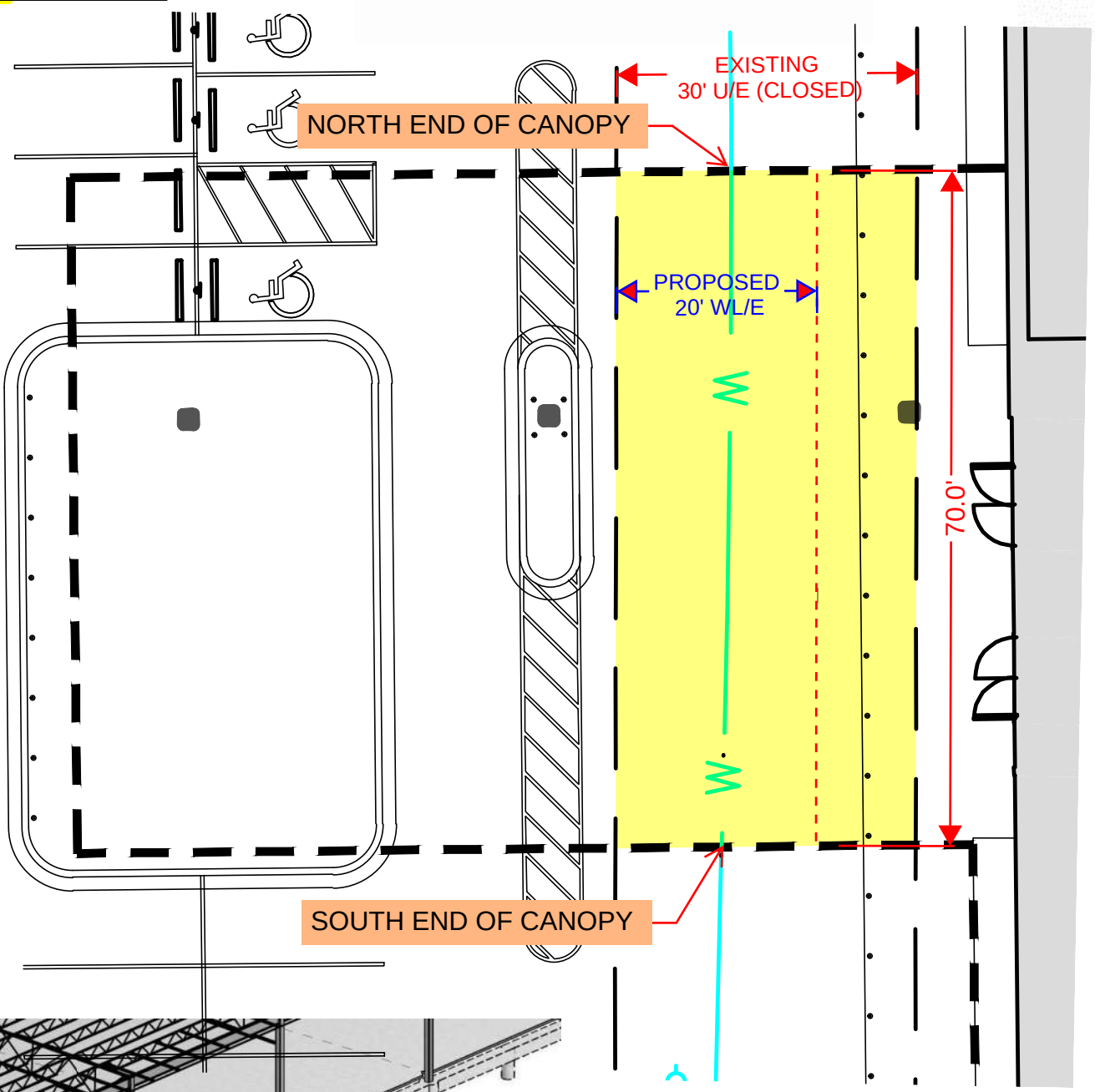
A

Exhibit "B"



SOUTH ELEVATION

1/16" = 1'-0"



EARL AREA = YELLOW SHADED AREA

DESCRIPTION:

SOUTH 71.0 FEET OF THE 20' WATERLINE EASEMENT AND THE ADJACENT 10' OF THE U/E THAT HAS BEEN CLOSED.

THIS AREA CAN ALSO BE DESCRIBED AS THE PORTION OF THE 30' U/E THAT LIES UNDER THE CANOPY.

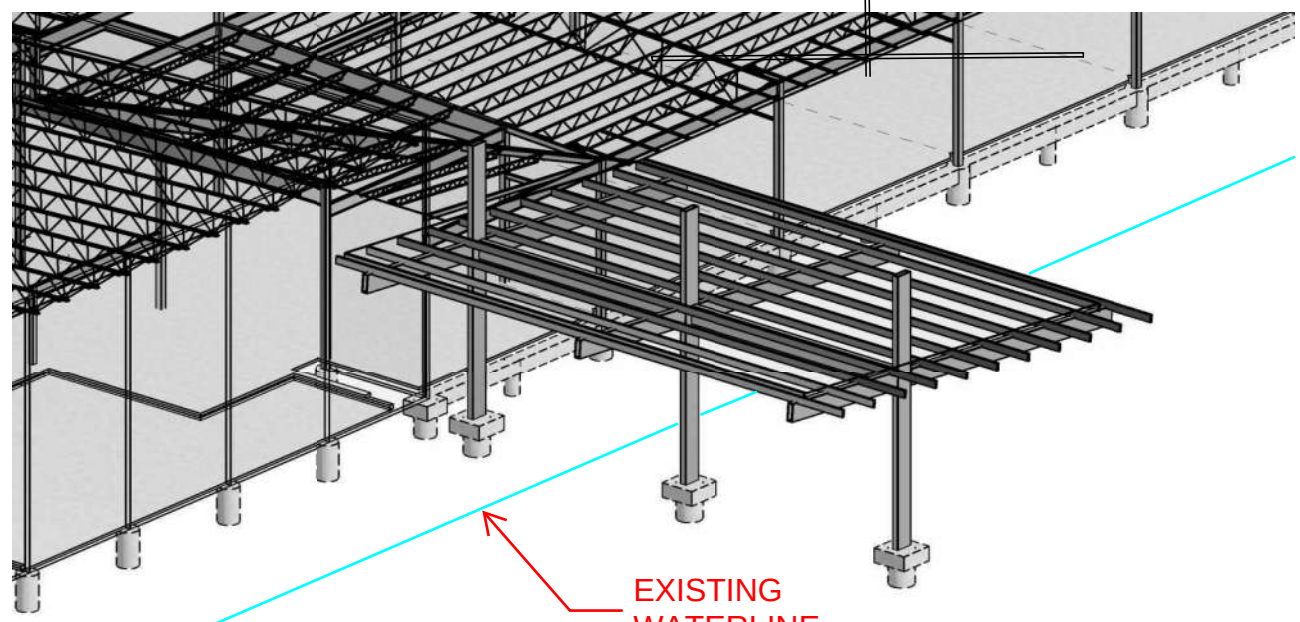


Exhibit "B"

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	3.j. CC-25-126
Previous/Related Action:	None
Background/Issue:	• Riggins Ventures, LLC. owns property at 230 N. Hoke Street. • This request is for acceptance of a sewer easement that serves the new Henderson Townhomes development. • The sewer easement dedication consists of 214 square feet (.0049 acres) more or less.
Proposal/Solution:	• Staff recommends acceptance of the sewer easement.
Financial Source/Impact:	• There is no additional financial impact from the acceptance of this easement.
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	Motion to accept the sewer easement and authorize the Mayor to execute the document
Prepared By:	Joshua Brown, Project Manager
Reviewed By:	David Barth Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Sanitary Sewer Easements

SANITARY SEWER EASEMENT

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned, **Riggins Ventures, LLC**, an Arkansas Limited Liability Company, certifies that they own and possess all rights, title, and interest to the following described real property situated in Payne County, State of Oklahoma, to-wit:

A TRACT OF LAND THAT IS PART OF LOTS ONE (1), TWO (2), THREE (3), FOUR (4), THIRTEEN (13), ALL OF LOTS FOURTEEN (14) AND FIFTEEN (15), AND THE WEST FORTY (40) FEET OF LOT SIXTEEN (16), ALL IN BLOCK ONE (1), NORTH CENTRAL ADDITION, TO THE CITY OF STILLWATER, PAYNE COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE RECORDED PLAT THEREOF, SAID TRACT OF LAND BEING DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 1; THENCE NORTH 89°14'30" EAST ALONG THE NORTH LINE OF LOT 1 FOR 10.00 FEET TO THE POINT OF BEGINNING OF SAID TRACT OF LAND; THENCE CONTINUING NORTH 89°14'30" EAST ALONG SAID NORTH LINE AND ALONG THE NORTH LINE OF LOT 16 FOR 262.70 FEET TO A FOUND 1/2" IRON PIN; THENCE SOUTH 00°30'15" EAST FOR 89.79 FEET; THENCE SOUTH 89°14'30" WEST PARALLEL WITH THE SOUTH LINE OF LOT 16 FOR 45.06 FEET TO THENCE SOUTH 00°50'58" EAST PARALLEL WITH THE EAST LINE OF LOTS 14 AND 13 FOR 31.85 FEET; THENCE SOUTH 89°16'33" WEST FOR 217.37 FEET; THENCE NORTH 00°43'17" WEST AND PARALLEL WITH THE WEST LINE OF LOTS 4, 3, 2, AND 1 FOR 121.51 FEET TO THE POINT OF BEGINNING OF SAID TRACT OF LAND.

SAID TRACT OF LAND CONTAINS 0.700 ACRE, MORE OR LESS.

THE LEGAL DESCRIPTION FOR THIS TRACT WAS CREATED BY CLAYTON CANTRELL, OKLAHOMA PLS #1802, FEBRUARY 3, 2025.

and further that the undersigned, in consideration of the sum of One Dollar (\$1.00), in hand paid and other good and valuable consideration, for them, their heirs, successors, executors, administrators, and assigns do hereby grant, bargain, sell, and convey unto the **City of Stillwater**, Oklahoma, a Municipal Corporation, its successors and assigns, an easement for the installation, operation and maintenance of *sanitary sewer* utility(ies) through, over, under, and across the portions of the above-described property dedicated on said recorded plat or instrument, for the purpose heretofore stated as follows:

THE WEST SEVENTEEN (17) FEET OF THE EAST THIRTY-FIVE (35) FEET OF THE ABOVE REFERENCED TRACT

SAID EASEMENT CONTAINS 214 SQUARE FEET (0.0049 ACRES), MORE OR LESS, AND IS SUBJECT TO ALL RECORDED EASEMENTS AND RIGHTS OF WAY THEREOF.

Except as herein granted, the grantors shall continue to have the full use and enjoyment of the properties herein granted or described for appropriate purposes. At no time shall the grantors commit a use, occupation or enjoyment thereof that might cause a hazardous condition and no building, structure or obstruction shall be located or constructed on said easement by the grantors, their successors or assigns, nor shall the grantors allow said easement to be encumbered in any way so that the City of Stillwater shall not be afforded access to said utility(ies) at any and all times.

Dakota Riggins, Managing Member

[illegible]

Before me, a Notary Public in and for said County and State on this 20th day of August, 2025, personally appeared, **Dakota Riggins, Managing Member**, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed and as the free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.

NOTARY PUBLIC

My Commission Expires: 11/09/2026
My Commission Number: 18011428
(SEAL)



STATE OF OKLAHOMA)
) ss.
COUNTY OF PAYNE)

NOW, on this ____ day of _____, 2025, the City Council of the City of Stillwater, State of Oklahoma, a municipal corporation, acting for and in behalf of said municipal corporation, during regular session, does hereby approve and accept from the named Grantor this delivered general utility easement and directs the Mayor and Clerk of said City of Stillwater to indicate the same by their signatures and seal of the City of Stillwater, State of Oklahoma.

WILLIAM H. JOYCE, MAYOR
CITY OF STILLWATER, OKLAHOMA

(SEAL)

ATTEST:

TERESA KADAVY, CITY CLERK
CITY OF STILLWATER, OKLAHOMA

Approved as to form and legality this ____ day of _____, 2025

KIMBERLY CARNLEY, CITY ATTORNEY
CITY OF STILLWATER, OKLAHOMA

REPORT TO: CITY COUNCIL**MEETING DATE: SEPTEMBER 8, 2025**

Agenda Item:	3.k. CC-25-127
Previous/Related Action:	CC-22-06, January 24, 2022: Authorization of related Deferred Maintenance Projects CC-22-20, February 14, 2022: Master Services Agreement with Gose and Associates for related projects
Background/Issue:	On January 24, 2022, staff presented a list of projects to Council and requested authorization to create construction projects. Funds that were initially encumbered do not meet today's revised needs and costs.
Proposal/Solution:	- Returning appropriated funds to appropriate Funds and requesting new appropriations and authorizations for expenditures, based on current project scope. - A separate item on this evening's agenda will address the current status of the project.
Financial Source/Impact:	N/A
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	Approve Budget Amendments returning funds to the Transportation Sales Tax Fund and the Stormwater Fund.
Prepared By:	Bill Millis, Director of Engineering
Reviewed By:	Bill Millis Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Eng - 210 Fund Balance #1 - Exp - 9.8.2025
2. Eng - 260 Fund Balance #1 - Exp - 9.8.2025
3. Eng - 260 Fund Balance #3 - Exp - 9.8.2025
4. Eng - 210 Fund Balance #2 - Exp - 9.8.2025
5. Eng - 260 Fund Balance #2 - Exp - 9.8.2025
6. Eng - 260 Fund Balance #4 - Exp - 9.8.2025
7. Budget Amendment Summary

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Return the unspent appropriations from the projects to the fund balance of the Stormwater Fund.

Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
Decrease:	Berry Creek Drainage 2104035 - 53067	22TR05210	\$ 10,384	(\$ 10,384)	\$ 0
	Berry Creek Drainage 2104035 - 54009	22TR05210	\$ 75,000	(\$ 75,000)	\$ 0
	Berry Creek Drainage 2104035 - 54020	22TR05210	\$ 4,704	(\$ 590)	\$ 4,114
	Wright Drive Drainage 2104035 - 53067	22TR06210	\$ 3,846	(\$ 3,846)	\$ 0
	Wright Drive Drainage 2104035 - 54009	22TR06210	\$ 25,000	(\$ 25,000)	\$ 0

Net Change: (will usually result in a total increase or decrease)

(\$ 114,820)

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Return the unspent appropriations from the projects to the fund balance of the Transportation Sales Tax Fund.

Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
Decrease:					
Drop Inlet	2604035 - 54009	22TR08260	\$ 27,675	(\$ 27,675)	\$ 0
Unv. Cir. Sidewalk	2604035 - 53067	22TR13260	\$ 7,692	(\$ 7,692)	\$ 0
Unv. Cir. Sidewalk	2604035 - 54009	22TR13260	\$ 50,000	(\$ 50,000)	\$ 0
Unv. Cir. Sidewalk	2604035 - 54020	22TR13260	\$ 2,072	(\$ 2,072)	\$ 0
	-				\$ 0

Net Change: (will usually result in a total increase or decrease)

(\$ 87,439)

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Return the unspent appropriations from the project to the fund balance of the Transportation Sales Tax Fund.

Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
Lowery to Amory	2604035 - 53067	22TR15260	\$ 7.692	(\$ 7.692)	\$ 0
Lowery to Amory	2604035 - 54009	22TR15260	\$ 50.000	(\$ 50,000)	\$ 0
Lowery to Amory	2604035 - 54020	22TR15260	\$ 3.530	(\$ 3.530)	\$ 0
	-				\$ 0
	-				\$ 0

Net Change: (will usually result in a total increase or decrease)

(\$ 61,222)

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Return the unspent appropriations from the project to the fund balance of the Stormwater Fund.

Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0
Decrease:					
Lakeview Drain	2104035 - 53067	22TR11210	\$ 1,538	(\$ 1,538)	\$ 0
Lakeview Drain	2104035 - 54009	22TR11210	\$ 10,000	(\$ 10,000)	\$ 0
	-				\$ 0
	-				\$ 0
	-				\$ 0

Net Change: (will usually result in a total increase or decrease)

(\$ 11,538)

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Return the unspent appropriations from the project to the fund balance of the Transportation Sales Tax Fund.

	Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
Decrease:	Miller to Duck Sidewalk	2604035 - 53067	22TR14260	\$ 9,847	(\$ 9,847)	\$ 0
	Miller to Duck Sidewalk	2604035 - 54009	22TR14260	\$ 75,000	(\$ 75,000)	\$ 0
	Miller to Duck Sidewalk	2604035 - 54020	22TR14260	\$ 3,538	(\$ 2,994)	\$ 544
		-				\$ 0
		-				\$ 0

Net Change: (will usually result in a total increase or decrease)

(\$ 87,841)

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Return the unspent appropriations from the project to the fund balance of the Transportation Sales Tax Fund.

	Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
Decrease:	500 W Univ Traffic	2604035 - 53067	22TR16260	\$ 5,625	(\$ 5,625)	\$ 0
	500 W Univ Traffic	2604035 - 54009	22TR16260	\$ 25,000	(\$ 25,000)	\$ 0
	500 W Univ Traffic	2604035 - 54020	22TR16260	\$ 1,713	(\$ 1,686)	\$ 27
		-				\$ 0
		-				\$ 0

Net Change: (will usually result in a total increase or decrease)

(\$ 32,311)

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Clarification								
Account Name		Account Number	Project Number	Current Budget Amount		Amount of Change	New Budget Amount	
Increase	Misc. Deferred Maintenance Improv.	2104035-54009	26TR02210	\$	-	\$ 52,325.00	\$ 52,325.00	
	Misc. Deferred Maintenance Improv.	2104035-54009	26TR03210	\$	-	\$ 33,250.00	\$ 33,250.00	
	Misc. Deferred Maintenance Improv.	2604035-54009	26TR03260	\$	-	\$ 344,284.00	\$ 344,284.00	
	Misc. Deferred Maintenance Improv.	2604035-54020	26TR03260	\$	-	\$ 33,927.00	\$ 33,927.00	
							\$ 463,786.00	In New Appropriation
Decrease	Berry Creek Drainage	2104035-53067	22TR05210	\$	10,384.00	\$ (10,384.00)	\$ -	No
	Berry Creek Drainage	2104035-54009	22TR05210	\$	75,000.00	\$ (75,000.00)	\$ -	No
	Berry Creek Drainage	2104035-54020	22TR05210	\$	4,704.00	\$ (590.00)	\$ 4,114.00	No
	Wright Drive Drainage	2104035-53067	22TR06210	\$	3,846.00	\$ (3,846.00)	\$ -	No
	Wright Drive Drainage	2104035-54009	22TR06210	\$	25,000.00	\$ (25,000.00)	\$ -	No
	Lakeview Drain	2104035-53067	22TR11210	\$	1,538.00	\$ (1,538.00)	\$ -	Yes
	Lakeview Drain	2104035-54009	22TR11210	\$	10,000.00	\$ (10,000.00)	\$ -	Yes
	Drop Inlet	2604035-54009	22TR08260	\$	27,675.00	\$ (27,675.00)	\$ -	Yes
	Unv. Cir. Sidewalk	2604035-53067	22TR13260	\$	7,692.00	\$ (7,692.00)	\$ -	Yes
	Unv. Cir. Sidewalk	2604035-54009	22TR13260	\$	50,000.00	\$ (50,000.00)	\$ -	Yes
	Unv. Cir. Sidewalk	2604035-54020	22TR13260	\$	2,072.00	\$ (2,072.00)	\$ -	Yes
	Miller to Duck S	2604035-53067	22TR14260	\$	9,847.00	\$ (9,847.00)	\$ -	Yes
	Miller to Duck S	2604035-54009	22TR14260	\$	75,000.00	\$ (75,000.00)	\$ -	Yes
	Miller to Duck S	2604035-54020	22TR14260	\$	3,538.00	\$ (2,994.00)	\$ 544.00	Yes
	Lowery to Armory	2604035-53067	22TR15260	\$	7,692.00	\$ (7,692.00)	\$ -	Yes
	Lowery to Armory	2604035-54009	22TR15260	\$	50,000.00	\$ (50,000.00)	\$ -	Yes
	Lowery to Armory	2604035-54020	22TR15260	\$	3,530.00	\$ (3,530.00)	\$ -	Yes
	500 W Unv Traffic	2604035-54020	22TR16260	\$	5,625.00	\$ (5,625.00)	\$ -	No
	500 W Unv Traffic	2604035-53067	22TR16260	\$	25,000.00	\$ (25,000.00)	\$ -	No
	500 W Unv Traffic	2604035-54020	22TR16260	\$	1,713.00	\$ (1,686.00)	\$ 27.00	No
Net Change to Stormwater Fund (210)						\$ (40,783.00)		
Net Change to Transportation Sales Tax Fund (260)						\$ 109,398.00		



Agenda Item:	3.I. CC-25-128										
Previous/Related Action:	CC-22-06, January 24, 2022: Authorization of related Deferred Maintenance Projects CC-22-20, February 14, 2022: Master Services Agreement with Gose and Associates for related projects										
Background/Issue:	- On January 24, 2022, staff presented a list of projects to Council and requested authorization to create construction projects. - Gose and Associates has completed plans for the construction of the Miscellaneous Deferred Maintenance Improvements project. - This project will include work on the Boomer dam spillway, new and replacement sidewalk connections, and drainage improvements.										
Proposal/Solution:	- The Project was advertised for bids on July 19, 2025. - Bids were opened on August 27, 2025. The bids received are as follows: <table border="1"> <thead> <tr> <th></th><th>Total Base Bid</th></tr> </thead> <tbody> <tr> <td>MK Excavation</td><td>\$373,791.75</td></tr> <tr> <td>Engineers-Estimate</td><td>\$374,196.50</td></tr> <tr> <td>Lopp Construction LLC</td><td>\$392,222.22</td></tr> <tr> <td>JMB Concrete Construction Inc.</td><td>466,120.00</td></tr> </tbody> </table> - Staff have reviewed the bid package and recommend the project be awarded to MK Excavation, LLC at a construction bid price of \$373,791.75. - During a meeting of the Transportation Projects Advisory Committee (TPAC) on August 28, 2025, the committee took action to recommend City Council award the project to the lowest responsive, responsible bidder. - A Task Order, under the existing Master Services Agreement, with Gose and Associates has been negotiated for construction administrative services for this project.		Total Base Bid	MK Excavation	\$373,791.75	Engineers-Estimate	\$374,196.50	Lopp Construction LLC	\$392,222.22	JMB Concrete Construction Inc.	466,120.00
	Total Base Bid										
MK Excavation	\$373,791.75										
Engineers-Estimate	\$374,196.50										
Lopp Construction LLC	\$392,222.22										
JMB Concrete Construction Inc.	466,120.00										

Financial Source/Impact:	Sufficient funds are available in the Transportation Sales Tax and Stormwater Funds.
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	• Award a Unit Price Contract to MK Excavation, LLC for \$373,791.75; • Authorize the City Manager to execute the Contract and related documents; • Authorize the City Manager to execute Task Order 3 with Gose and Associates; • Authorize total construction expenditures of \$463,786.00, which includes construction contract, construction administrative services, testing, and contingency; and • Approve budget amendments in the amount of \$378,211 from the Transportation Sales Tax Fund and in the amount of \$85,575 from the Stormwater Fund.
Prepared By:	Bill Millis, Director of Engineering
Reviewed By:	Bill Millis Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Eng - Deferred Maintenance 210 - Exp - 9.8.2025
2. Task Order 3 - Gose MSA - Signed
3. Eng - Deferred Maintenance 260 - Exp - 9.8.2025
4. Budget Amendment Summary

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Appropriate funds for Miscellaneous Deferred Maintenance Improvement Project. Funds from the Stormwater fund.

	Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	Misc. Deferred Maintenance Improv	2104035 - 54009	26TR02210	\$ 0	\$ 52,325	\$ 52,325
	Misc. Deferred Maintenance Improv	2104035 - 54009	26TR03210	\$ 0	\$ 33,250	\$ 33,250
		-				\$ 0
		-				\$ 0
		-				\$ 0
Decrease:		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 85,575

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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EXHIBIT L
SUGGESTED FORM OF TASK ORDER

This is Task Order No. <u>3</u> , consisting of <u>3</u> pages
--

Task Order

In accordance with Paragraph 1.01 of the Agreement Between Owner and Engineer for Professional Services, dated May 9, 2024 ("Agreement"), Owner and Engineer agree as follows:

1. Specific Project Data

A. Title: (26TR02 / 26TR03) Miscellaneous Deferred Maintenance Improvements

B. Description: Construction Administration for 26TR02 / 26TR03

C. Number of Construction Contracts

The Specific Project is anticipated to be constructed under 1 construction contract.

2. Services of Engineer

- Provide construction administrative services as requested by Owner, including but not limited to, attendance and recording of meeting minutes for construction meetings, review and judgement regarding acceptance for contractor submittals, prepare responses to RFIs, review contractor invoices and assist in processing of payment applications, prepare required WCDs and COs, assist in completion of all documentation required by contract for Final Completion.
- Visit construction sites, as requested by owner, to confirm accordance with construction plans.
- Assist in Utility Coordination as requested by Owner required for the proper execution of the construction plans.

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and in Exhibit B.

4. Times for Rendering Services

To be for an indeterminate amount of time, beginning with the associated construction contract Notice to Proceed and extending through final completion requirements of the same construction contract.

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered according to Attachment B to Exhibit L-02 with total compensation for Scope of Services not to exceed \$21,752.50 to be distributed as follows:

B. The terms of payment are set forth in Article 4 of the Agreement and in Exhibit C.

6. Consultants:

None

7. Other Modifications to Agreement:

None

8. Attachments:

None

9. Documents Incorporated By Reference:

None

10. Terms and Conditions: Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is _____, 2025.

OWNER:

By: City of Stillwater

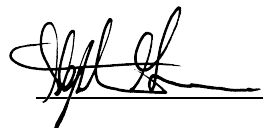
By: _____

Name: J. Brady Moore

Title: City Manager

ENGINEER:

By: Gose & Associates

By: 

Name: Stephen C. Gose

Title: President

Engineer License or Firm's C.A. 1640
Certificate No. _____

State of: Oklahoma

DESIGNATED REPRESENTATIVE FOR
TASK ORDER:

Name: Bill Millis

DESIGNATED REPRESENTATIVE FOR TASK
ORDER:

Name: Stephen C. Gose

Title: Director

Address: PO Box 1449
Stillwater, OK 74076-1449

E-Mail
Address: Bill.Millis@stillwaterok.gov

Phone: (405) 742-8259

Fax: _____

Title: President

Address: P.O. Box 2371
Stillwater, OK 74076

E-Mail
Address: stephen@gose-associates.com

Phone: (405) 743-4907

Fax: N/A

Task	Description	Senior Engineer	Project Manager	Engineer 4	Engineer 2	Engineer 1	Designer	CADD Tech 2	CADD Tech 1	Admin.	Total Labor Hours	Sub - 01	Sub - 02	Sub - 03	Printing	Sub-Total	Total
	BASIC DESIGN SERVICES	rwg	scg	kfp	ccwb				intern	lbg							
	Phase 1																
1	Bid Phase Services										8.0						\$ 1,450.00
	Preparation of Bid Documents		1.0	5.0							6.0					\$ 1,065.00	
	Meeting		1.0	1.0							2.0					\$ 385.00	
2	Pre Construction										4.5					\$ -	\$ 832.50
	Agenda		0.5	1.0							1.5					\$ 277.50	
	Meeting		1.0	1.0							2.0					\$ 385.00	
	Minutes		0.0	1.0							1.0					\$ 170.00	
3	Monthly Progress Meetings (3)										13.5					\$ -	\$ 2,497.50
	Agenda		1.5	3.0							4.5					\$ 832.50	
	Meeting		3.0	3.0							6.0					\$ 1,155.00	
	Minutes		0.0	3.0							3.0					\$ 510.00	
4	Pay Applications										4.5					\$ -	\$ 832.50
	Review		1.5	3.0							4.5					\$ 832.50	
5	Construction Phase Services										83.0					\$ -	\$ 15,415.00
	Boomer Dam Spillway		2.5	2.5							5.0					\$ 962.50	
	Lakeview and Dryden		2.5	2.5							5.0					\$ 962.50	
	Miller Sidewalk		5.0	15.0							20.0					\$ 3,625.00	
	University Circle		2.5	2.5							5.0					\$ 962.50	
	9th & Lowry Sidewalk		2.5	2.5							5.0					\$ 962.50	
	19th & Country Club		5.0	15.0							20.0					\$ 3,625.00	
	Clarifications/Change Orders		2.0	5.0							7.0					\$ 1,280.00	
	Review Traffic Control Plans		5.0	5.0							10.0					\$ 1,925.00	
	Shop Drawings/Substitutes			2.0							2.0					\$ 340.00	
	Contractor Completion Documents / Final Acceptability		2.0	2.0							4.0					\$ 770.00	
	Utility Cordination		2.0	8.0							10.0					\$ 1,790.00	
6	Post-Construction Phase										4.0					\$ -	\$ 725.00
	Site Evaluation, Record Drawings, Contractor Evaluation		1.0	3.0							4.0					\$ 725.00	
	TOTAL HOURS	0.0	41.5	86.0	0.0	0.0	0.0	0.0	0.0	0.0	122.5						
	HOURLY RATE	\$ 225.00	\$ 215.00	\$ 170.00	\$ 150.00	\$ 140.00	\$ 140.00	\$ 120.00	\$ 115.00	\$ 75.00							
	LABOR COSTS	\$ -	\$ 8,922.50	\$ 14,620.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	\$ 23,542.50	\$ 21,752.50

Hourly Rates are valid thru June 30, 2026. After that date there may be a 3% increase for each 12 month period thereafter.

Budget Amendment Request

For Budget Year 2026

Department of Finance
723 S. Lewis Street/P.O. Box 1449
Stillwater, OK 74076-1449

Office: 405.372.0025
Web: stillwater.org

Date: 09/02/2025

Department: Transportation

Requested by: Bill Millis

Explanation:

Expenditures:
Appropriate funds for Miscellaneous Deferred Maintenance Improvement Project. Funds from the Transportation Sales Tax fund.

	Account Name	Account Number (xxxxxxx-xxxxx)	Project Number	Current Budget Amount	Amount of Change	New Budget Amount
Increase:	Misc. Deferred Maintenance Improv	2604035 - 54009	26TR03260	\$ 0	\$ 344,284	\$ 344,284
	Misc. Deferred Maintenance Improv	2604035 - 54020	26TR03260	\$ 0	\$ 33,927	\$ 33,927
		-				\$ 0
		-				\$ 0
		-				\$ 0
Decrease:		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0
		-				\$ 0

Net Change: (will usually result in a total increase or decrease)

\$ 378,211

Reviewed by Department Manager: _____

Date: _____

Reviewed by Finance: _____

Date: _____

Approved by CMO: _____

Date: _____

Approved by City Council: ☐ Yes ☐ No

Date: _____

Processed by Finance: _____

Date: _____

Set ID: _____

Date Sent to SA&I: _____

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Budget Amendment Clarification								
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							\$ 463,786.00	In New Appropriation
Decrease	Berry Creek Drainage	2104035-53067	22TR05210	\$	10,384.00	\$ (10,384.00)	\$ -	No
	Berry Creek Drainage	2104035-54009	22TR05210	\$	75,000.00	\$ (75,000.00)	\$ -	No
	Berry Creek Drainage	2104035-54020	22TR05210	\$	4,704.00	\$ (590.00)	\$ 4,114.00	No
	Wright Drive Drainage	2104035-53067	22TR06210	\$	3,846.00	\$ (3,846.00)	\$ -	No
	Wright Drive Drainage	2104035-54009	22TR06210	\$	25,000.00	\$ (25,000.00)	\$ -	No
	Lakeview Drain	2104035-53067	22TR11210	\$	1,538.00	\$ (1,538.00)	\$ -	Yes
	Lakeview Drain	2104035-54009	22TR11210	\$	10,000.00	\$ (10,000.00)	\$ -	Yes
	Drop Inlet	2604035-54009	22TR08260	\$	27,675.00	\$ (27,675.00)	\$ -	Yes
	Unv. Cir. Sidewalk	2604035-53067	22TR13260	\$	7,692.00	\$ (7,692.00)	\$ -	Yes
	Unv. Cir. Sidewalk	2604035-54009	22TR13260	\$	50,000.00	\$ (50,000.00)	\$ -	Yes
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	Miller to Duck S	2604035-53067	22TR14260	\$	9,847.00	\$ (9,847.00)	\$ -	Yes
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	Lowery to Armory	2604035-54009	22TR15260	\$	50,000.00	\$ (50,000.00)	\$ -	Yes
	Lowery to Armory	2604035-54020	22TR15260	\$	3,530.00	\$ (3,530.00)	\$ -	Yes
	500 W Unv Traffic	2604035-54020	22TR16260	\$	5,625.00	\$ (5,625.00)	\$ -	No
	500 W Unv Traffic	2604035-53067	22TR16260	\$	25,000.00	\$ (25,000.00)	\$ -	No
	500 W Unv Traffic	2604035-54020	22TR16260	\$	1,713.00	\$ (1,686.00)	\$ 27.00	No
Net Change to Stormwater Fund (210)						\$ (40,783.00)		
Net Change to Transportation Sales Tax Fund (260)						\$ 109,398.00		

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025

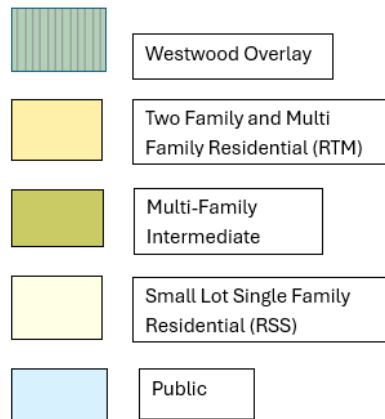
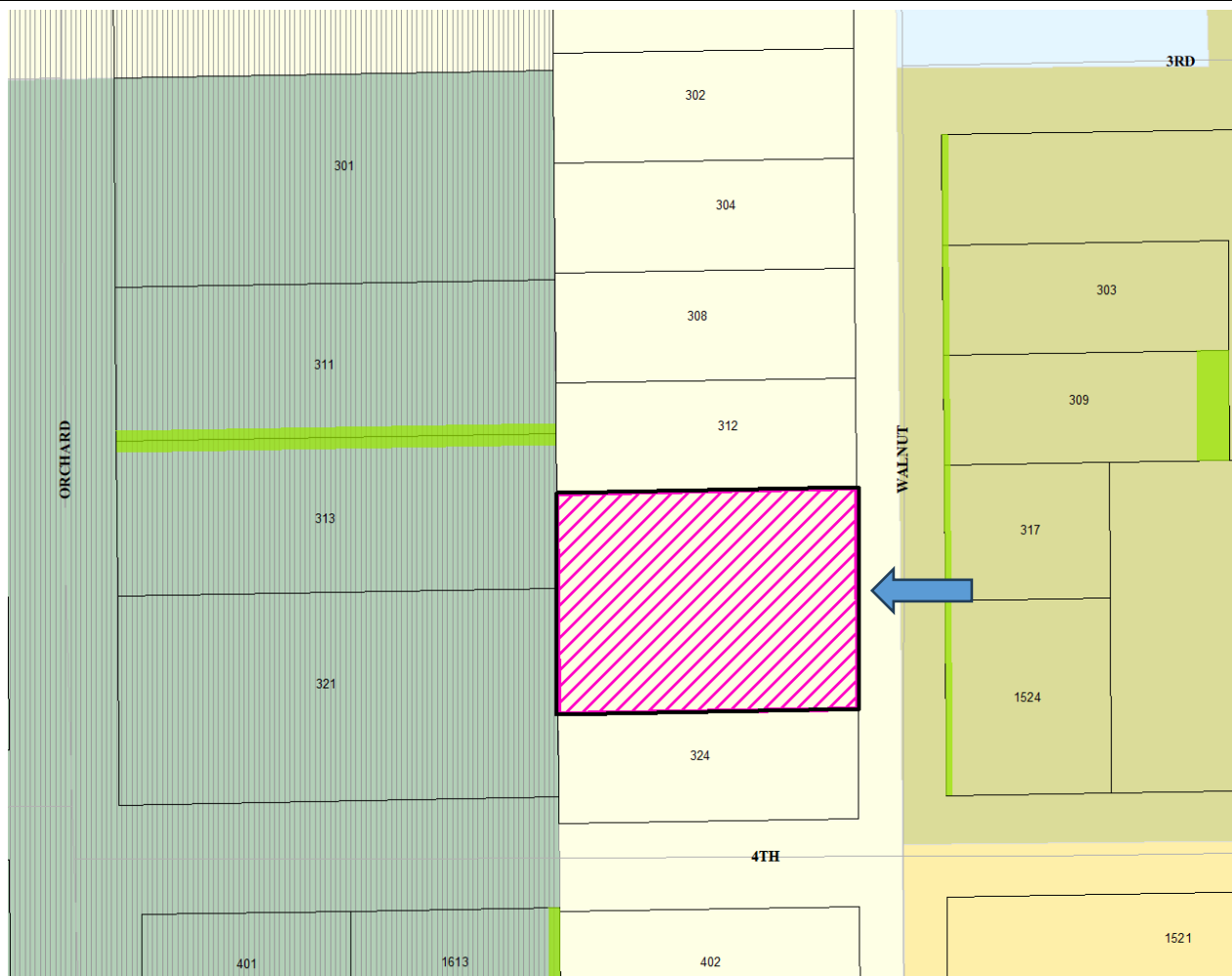


Agenda Item:	6.a. CC-25-129
Previous/Related Action:	July 8th, 2025 Planning Commission Report
Background/Issue:	The subject property is just north of the northwest corner of South Walnut Street and West 4th Avenue. There is currently a single-family structure and accessory structure on the property. The applicant is requesting rezoning the property to Two-Family Residential (RT) to allow for the development of three townhomes on the property. Townhomes are allowed with a Specific Use Permit in either the RSS or RT zoning district. The property is 0.31 acres and is currently zoned RSS. Per Sec. 23-132 of the Land Development Code, RSS zoning allows 8 units per acre and RT zoning allows 11 units per acre. Three townhomes on this property equates to 9.68 units per acre which is why the applicant is requesting to rezone the property from RSS to RT to increase the allowable density. The applicant is requesting a Specific Use Permit later on tonight's agenda that will potentially allow for townhomes on the property. On July 21, 2025 the map amendment was tabled until September 8, 2025.
Proposal/Solution:	The Planning Commission recommended approval of this Map Amendment with a vote of 4-0.
Financial Source/Impact:	There is no funding impact with this request.
Related Strategic Priority:	#4 CONNECTED SPACES
Recommended Action/Motion:	Motion to accept the Planning Commission recommendation and approve the Map Amendment for the property addressed as 320 S Walnut Street.
Prepared By:	Henry Bibelheimer, Senior Planner
Reviewed By:	David Barth Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. Area Map
2. Zoning Comparison Table

3. Minutes PC 07.08.2025



Stillwater OKLAHOMA
stillwaterok.gov

Project Type: Map Amendment (MA25-04)
Request: Rezone from Small Lot Single-Family Residential (RSS) to Multi-Family Intermediate (RMI)
Address: 320 S Walnut St.

ZONING COMPARISON CHART		
	RSS (Residential Single Family Small Lot)	RT (Residential Two-family)
Min Lot Size	5,000 square feet	7,500 square feet
Min Lot Width/Depth	50/100 feet	60/100 feet
Max Structure Height	35 feet	35 feet
Min Front Yard	20 feet/10 feet from alley	20 feet/10 feet from alley
Corner lot optional setback	Front: 20 feet Street Side: 15 feet	N/A
Min Side Yard - boundary with:		
Residential district	5 feet	5 feet
Commercial district	15 feet	15 feet
Industrial district	15 feet	15 feet
Min Rear Yard - boundary with:		
Residential district	20 feet	20 feet
Any other district	20 feet	20 feet
Max Lot Coverage	No max limit	40 percent
Landscaping/Screening (earth berms, shrubs, fences, decorative man-made materials, trees)	No requirements	No requirements
Permitted Uses by Right (Uses in <i>italic</i> are allowed in both zoning districts)	• <i>Conventional single-family</i> • <i>Residential design manufactured home</i>	• <i>Conventional single-family</i> • <i>Residential design manufactured home</i> • Two-family (duplex)

**STILLWATER PLANNING COMMISSION SUMMARY
REGULAR MEETING OF JULY 8TH, 2025
IN ACCORDANCE WITH THE OKLAHOMA OPEN MEETING
LAW, THE AGENDA WAS POSTED July 3rd, 2025 IN THE
MUNICIPAL BUILDING AT 723 SOUTH LEWIS STREET**

MEMBERS PRESENT

Riley Williams, Vice Chair
Mark Prather, Member
Mike Shanahan, Member
David Peters, Member

STAFF PRESENT

Kim Payne, Assistant City Attorney
David Barth, Development Services Director
Henry Bibelheimer, Senior City Planner
Joshua Brown, Development Coordinator
Alexandria Holle-Maged, Administrative Assistant

MEMBERS ABSENT

Jana Phillips, Chair

Staff Absent

1. CALL MEETING TO ORDER.

Vice Chair Williams called the meeting to order at 5:30 p.m.

2. PUBLIC HEARING

- c. Receive public comment regarding a request for a Map Amendment (MA25-04) to rezone property addressed as 320 S. Walnut Street from Small Lot Single-Family Residential (RSS) to Two-Family Residential (RT). (Tabled from the June 24th, 2025 meeting.

Mr. Joshua Brown, Development Coordinator, presents the item and discusses the following points:

- Shows pictures of the subject property, surrounding area and zoning.
- Shares a definition taken directly from the comprehensive plan: it states that “within the low-density residential category, conventional single-family detached dwellings, two-family units, and low-density multifamily are found — with single-family being the primary.”
- The gross density allows for up to 20 dwelling units per acre this proposal is 9.68 dwelling units per acre, three townhomes, three units.
- In August 2024, the Planning Commission heard a map amendment which proposed to rezone this property from RSS to RTM, the Planning Commission recommended denial of that request with a 5-to-0 vote.
- The map amendment was then withdrawn by the applicant before being heard by the City Council.
- This request was tabled from the June 24th, 2025 meeting.

Commissioner Shanahan asks Mr. Brown to refresh them on the reasons the previous item was denied. Mr. Brown explains that RTM is the most intensive multifamily zoning district and the Planning Commissioners previously felt that that was too intense for being next to the RSS Westwood Overlay. Mr. Brown states that staff believes this zoning is a better step down transition.

Vice Chair Williams adds that at the previous meeting the developer did not have a plan for what would be constructed.

Vice-Chair Williams asks if there are any further questions for staff; none respond. Vice Chair Williams invites the applicant forward to present.

Mr. Aaron Ferguson of Bancroft Design, 923 S. Lowry, comes to speak on the following:

- They have looked at a couple different zoning options, and the developer looked at a couple different ideas on what he wants to do with the property.
- States that the property meets the dimension requirements for RTM and RMI.
- Continues that Initially they looked at rezoning to RMI, but even though it meets the code dimension requirements, it doesn't meet the code overall area requirements for those zonings.
- Are requesting to rezone to RT because it gives more flexibility on the specific use of townhomes.
- There are apartments across the street and just down the street, so they believe this is in line with those uses.
- That staff had a couple issues with parking and with the dumpster location but thinks those have been resolved to staff satisfaction.

Vice Chair Williams clarifies that the next item on the agenda is the applicant applying for a Specific Use Permit to construct town homes. Mr. Ferguson confirms, and states there is a site plan included.

Vice-Chair Williams asks if there are any further questions; none respond. Vice Chair Williams opens the public hearing and asks if anyone would like to speak in favor or opposition; none respond. Vice-Chair Williams closes the public hearing and asks for findings and alternatives.

Mr. Brown first clarifies that townhomes are allowed in RSS and RT with a SUP; the reason for the RT request is the density requirements; believes in RSS it is 8 units per acre, and then in RT it is 11 units per acre; and the applicant is proposing 9.68.

Mr. Brown presents findings and alternatives, which are:

Findings:

1. The Land Development Code allows for the rezoning of land via Map Amendments.
2. RTM and RMI are located in the vicinity to the east and southeast with various high-density further east of the subject property.
3. The proposed townhomes align with the Comprehensive Plan, which calls for Low-Density Residential for the subject property location.

Alternatives:

1. Accept findings and recommend that the City Council approve the proposed map amendment as presented.
2. Find that the map amendment is not an appropriate use for the property based upon the impacts to the surrounding vicinity and do not recommend that the City Council approve the map amendment.
3. Find that additional information or discussion is needed prior to making a recommendation and table the request to a certain date.

Staff recommends Alternative 1.

Vice Chair Williams says he believes this zoning is better than what was previously presented as it allows for more of a transition zoning.

Commissioner Shanahan moved to accept findings and recommend that the City Council approve the proposed map amendment as presented , Commissioner Prather seconds.

Roll Call:	Phillips	Williams	Prather	Shanahan	Peters
	Absent	Yes	Yes	Yes	Yes

Time: 10 minutes

4. ADJOURN

ADJOURNMENT. This regular meeting of the Stillwater Planning Commission was called for adjournment by Commissioner Shanahan, seconded by Commissioner Peters at approximately 6:15 PM on July 8th, 2025. The next regularly scheduled meeting will be held Tuesday, July 15th 2025 at 5:30 p.m. in the City Commission Hearing Room, Municipal Building, 723 South Lewis Street.

Prepared by – Cindy Gibson, Administrative Services Manager

Approved by - _____
Stillwater Planning Commission

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025

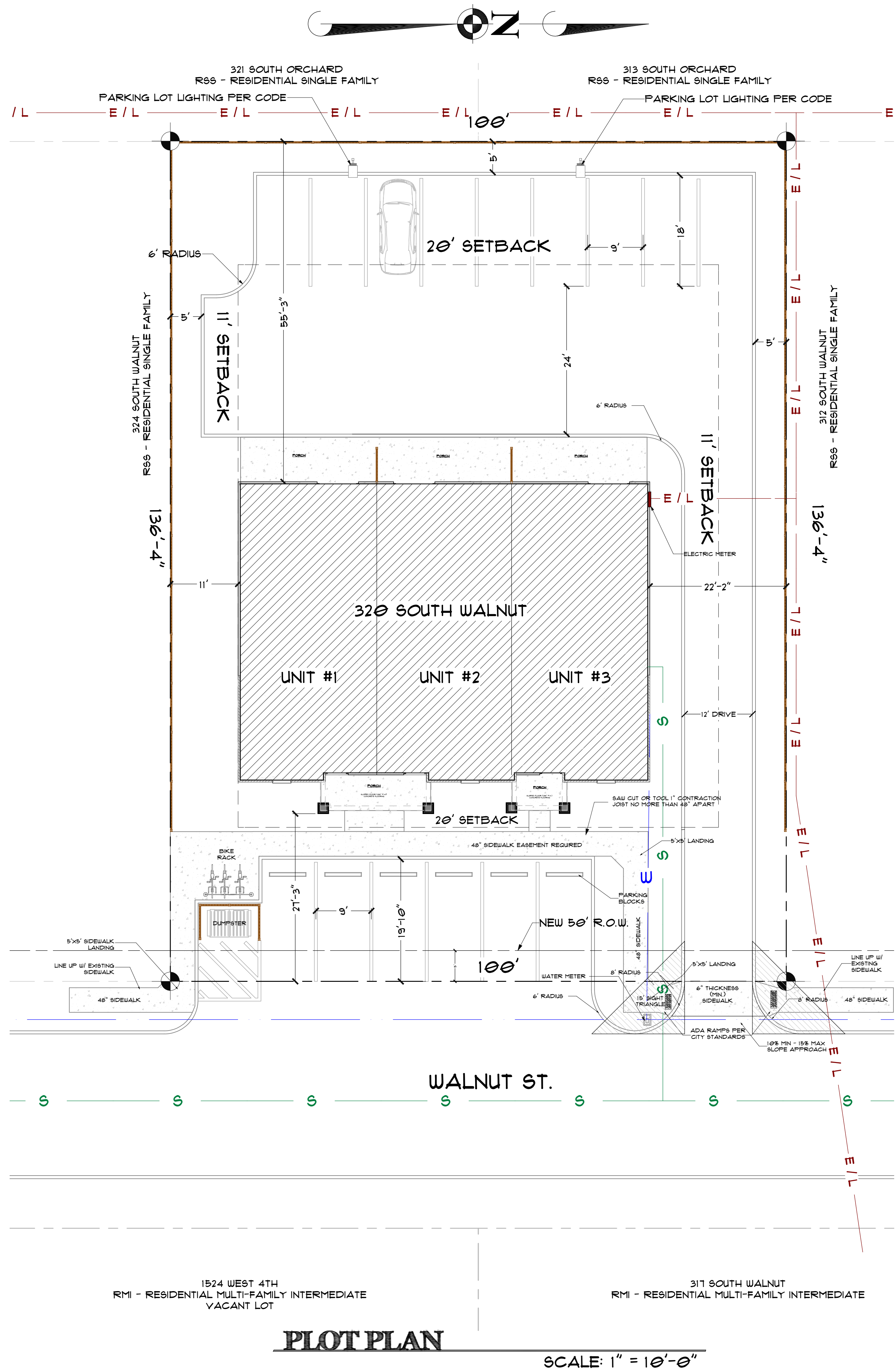


Agenda Item:	6.b. CC-25-130
Previous/Related Action:	July 8th, 2025 Planning Commission Report
Background/Issue:	The subject property is just north of the northwest corner of South Walnut Street and West 4th Avenue. There is currently a single-family structure and accessory structure on the property. The applicant is requesting a Specific Use Permit to allow townhomes at 320 South Walnut. Townhomes are allowed with a Specific Use Permit in either the Small Lot Single-Family Residential (RSS) or Two-Family (RT) zoning district. The property is 0.31 acres, and the property owner is proposing three attached townhomes. The requested density is 9.68 units per acre. The attached exhibits show the 3 proposed 4-bedroom townhomes. The density limit will not allow more than three units on the property, if the rezoning to RT is approved. The attached site plan does have some outstanding minor comments which will need to be addressed on the building permit site plan. Section 23-220 (Table 4.2) requires one parking space per bedroom, which means that 12 parking spaces will be required for the site. 9 parking spaces are provided behind the townhomes, and 6 public parking spaces are provided along Walnut Street. The public parking must be approved by the City Manager (23-211.10.c) and half of the public parking can count towards the parking requirement (23-210.c). Half of the 6 public spaces plus the 9 onsite spaces will meet the 12 space parking requirement. On July 21, 2025 the specific use permit was tabled until September 8, 2025 to allow time for an updated site plan to be submitted that meets the specific use permit site plan requirements.
Proposal/Solution:	Planning Commission recommended approval of the SUP with a 4-0 vote.
Financial Source/Impact:	None
Related Strategic Priority:	#4 CONNECTED SPACES

	#5 UNIQUE CULTURE
Recommended Action/Motion:	Motion to accept the Planning Commission recommendation and approve the Specific Use Permit for the property addressed as 320 S Walnut Street.
Prepared By:	Henry Bibelheimer, Senior Planner
Reviewed By:	David Barth Brady Moore Teresa Kadavy
Submitted By:	Brady Moore, City Manager

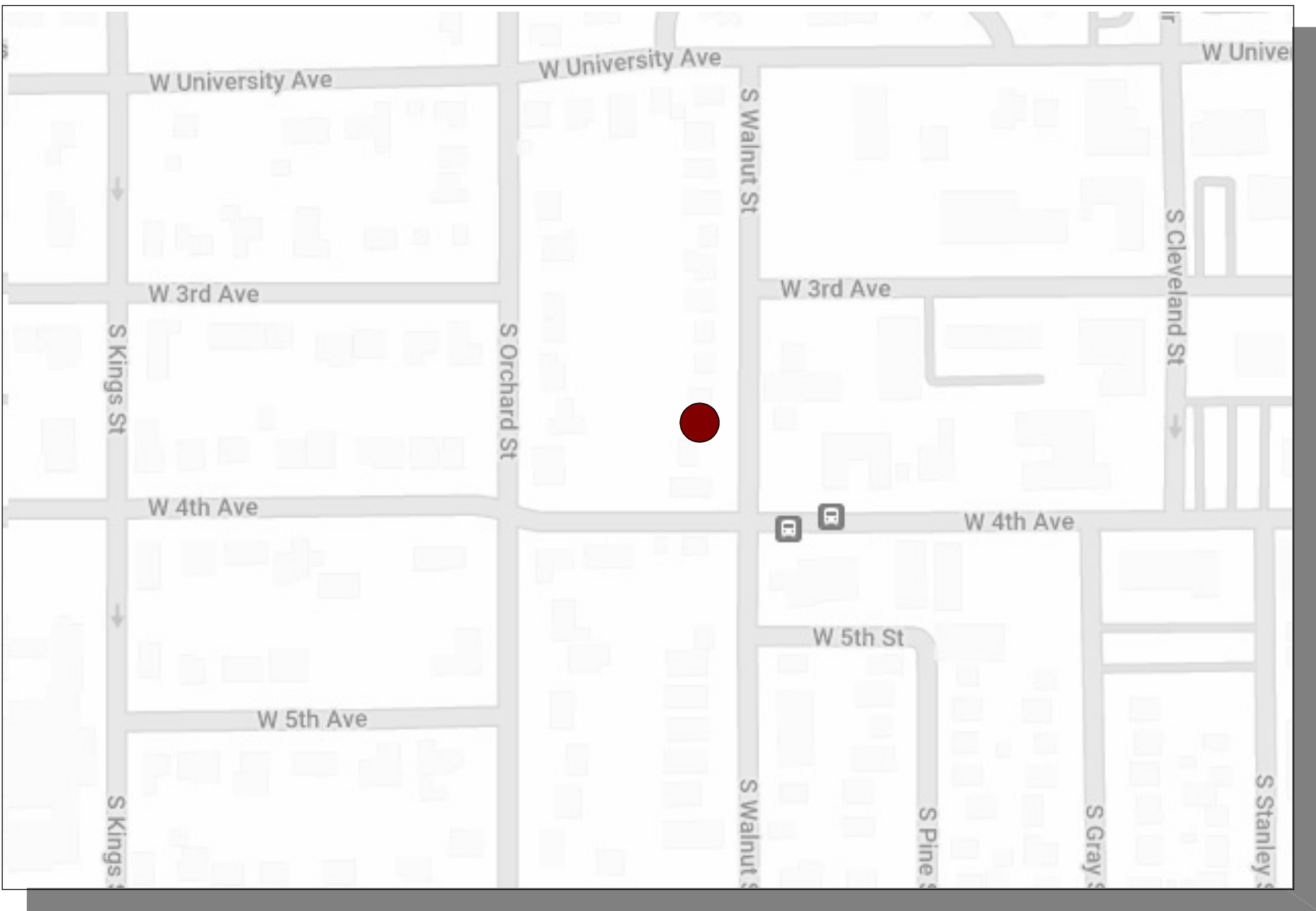
Attachments

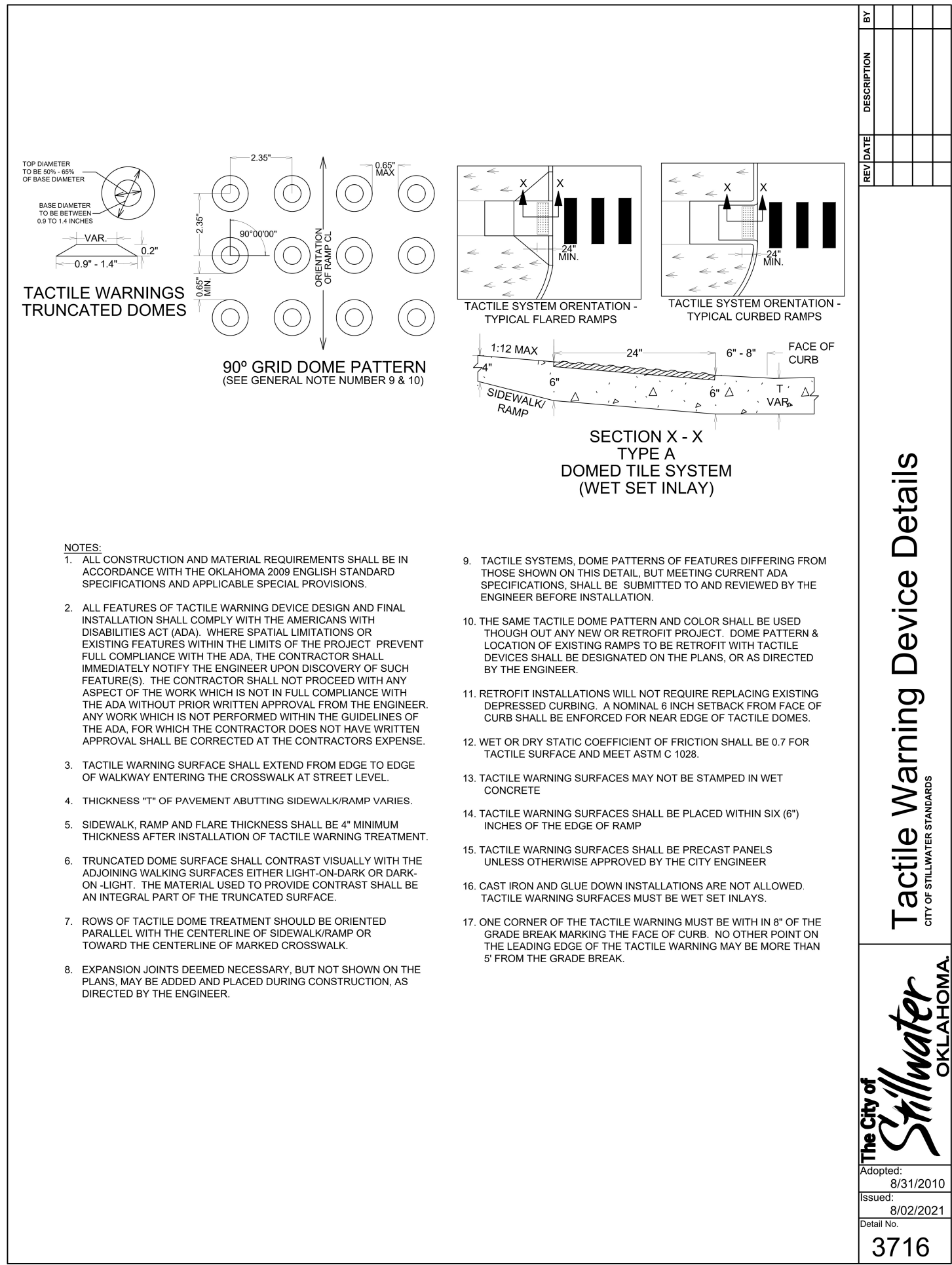
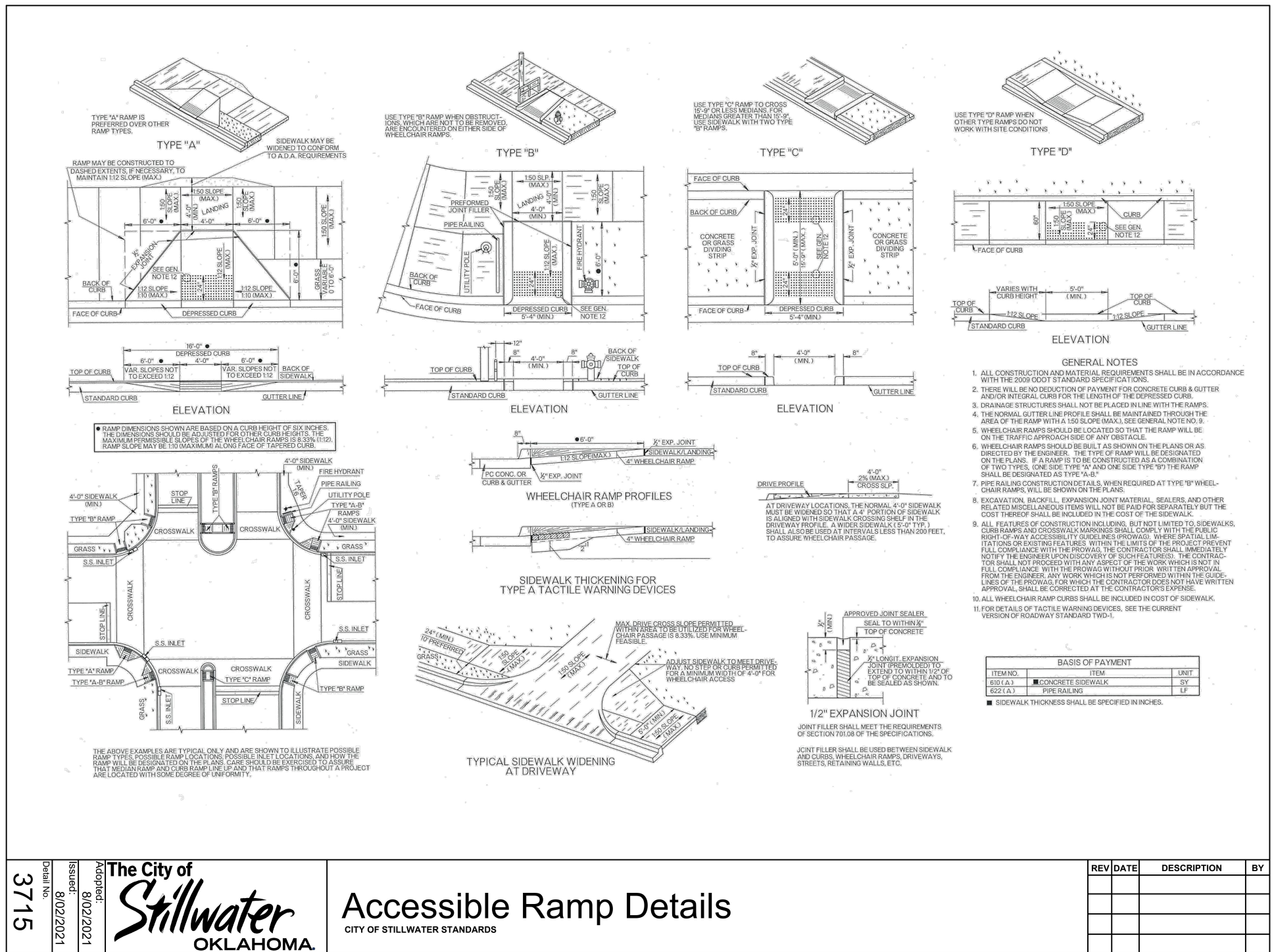
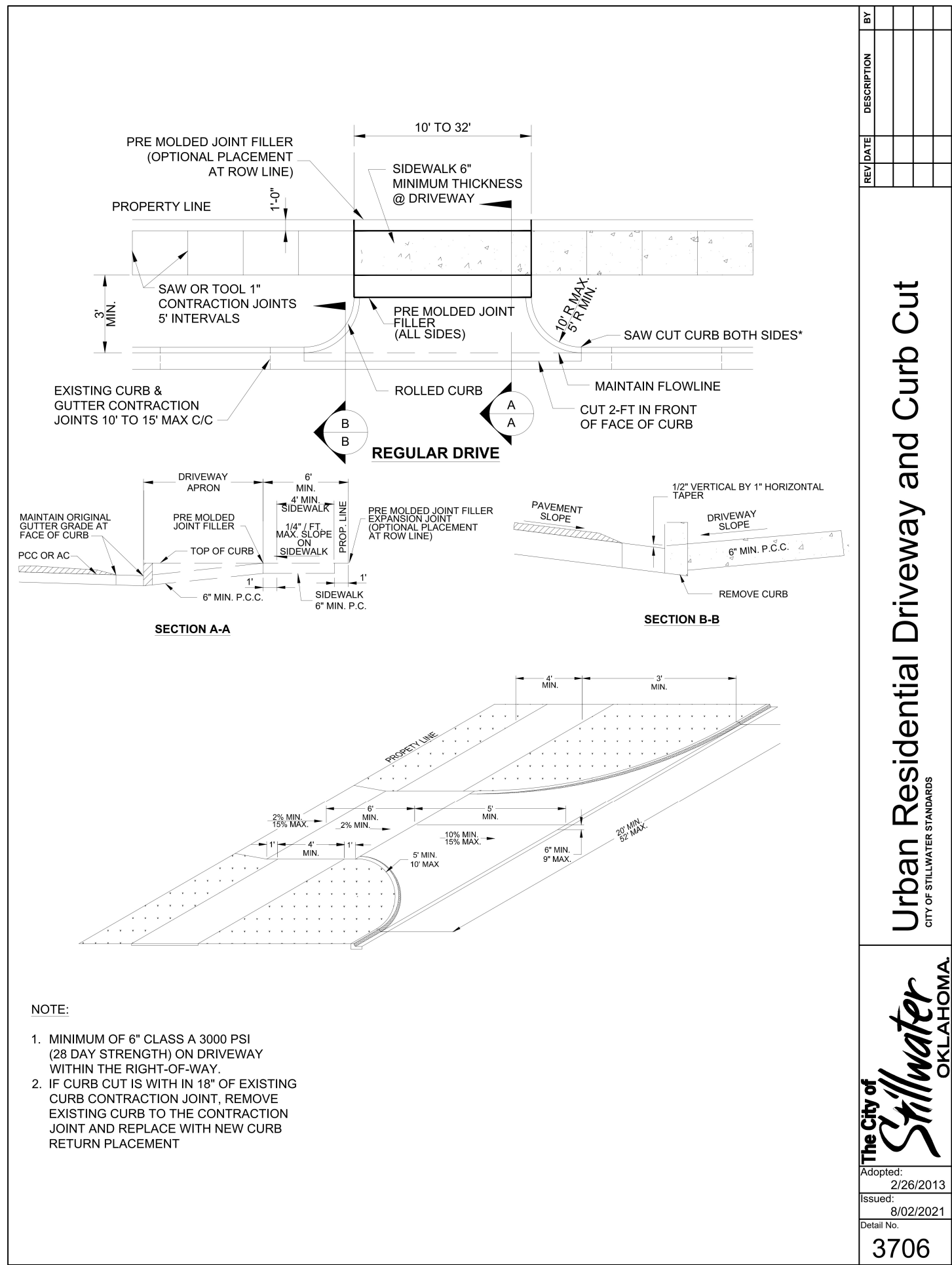
1. SUP Site Plan
2. Area Map
3. MInutes PC 07.08.2025

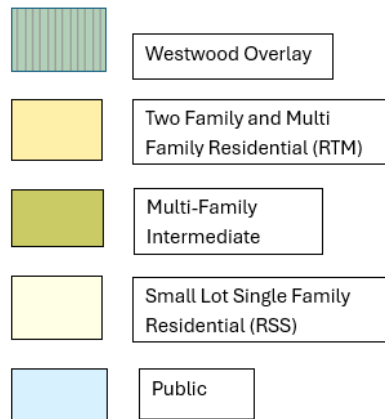
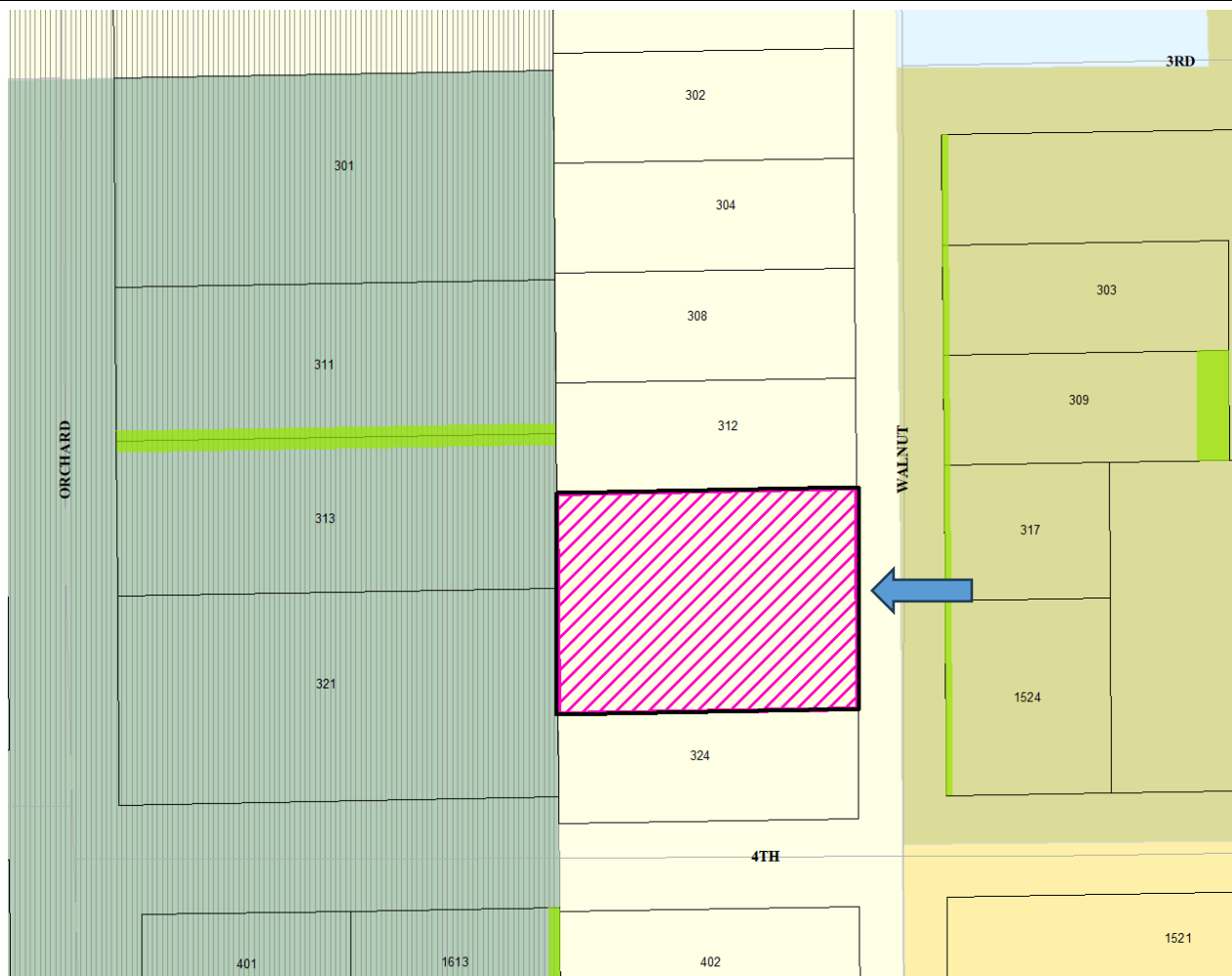


PROJECT DATA:

- 3 STORY TOWNHOMES
- 3 UNITS
- 4 BEDROOMS AND 3 1/2 BATHS EACH
- 15 PARKING SPACES (12 COUNT)
- BIKE RACK FOR 3 BIKES (MIN.)







Stillwater OKLAHOMA
stillwaterok.gov

Project Type: Specific Use Permit (SUP25-03)
Request: Allow Townhomes in the proposed Two-Family (RT) district.
Address: 320 S Walnut St.

**STILLWATER PLANNING COMMISSION SUMMARY
REGULAR MEETING OF JULY 8TH, 2025
IN ACCORDANCE WITH THE OKLAHOMA OPEN MEETING
LAW, THE AGENDA WAS POSTED July 3rd, 2025 IN THE
MUNICIPAL BUILDING AT 723 SOUTH LEWIS STREET**

MEMBERS PRESENT

Riley Williams, Vice Chair
Mark Prather, Member
Mike Shanahan, Member
David Peters, Member

STAFF PRESENT

Kim Payne, Assistant City Attorney
David Barth, Development Services Director
Henry Bibelheimer, Senior City Planner
Joshua Brown, Development Coordinator
Alexandria Holle-Maged, Administrative Assistant

MEMBERS ABSENT

Jana Phillips, Chair

Staff Absent

1. CALL MEETING TO ORDER.

Vice Chair Williams called the meeting to order at 5:30 p.m.

2. PUBLIC HEARING

- d. Receive public comment regarding a request for a Specific Use Permit (SUP25-03) for property addressed as 320 S. Walnut Street to allow townhomes in the Two-Family Residential (RT) district. (Tabled from the June 24th, 2025 meeting.)

Mr. Brown, Development Coordinator, presents staff report and discusses the following points:

- Shows the item and reiterates this is in relation to the previous site.
- There is a conceptual site plan and it does meet all setbacks.
- The dumpster is located within the property line.
- The parking actually is still in the right-of-way along the street.
- That request has been submitted to the Engineering Department for review, and then it will go down to City Manager's Office for approval.

Commissioner Prather asks for clarification about the parking being in the right-of-way. Mr. Brown confirms and shows that the dashed lined on the map is the property line; continues that they do exceed parking requirements as it is proposed where 9 were required and the project has 8 on the property and 7 in front of the building; however, the request to utilize the public right-of-way will still need to be approved.

Mr. David Barth, Development Service Director, comes to clarify that you are allowed to use on-street parking to count towards the parking; however, there is the need to have two on-street parking spaces to one space on the property to meet requirements.

Further discussion is held regarding parking, parking requirements, if not approved by City Manager's office, design modification to the site would be required to match the number of units to parking requirements;

request is to allow townhomes, not necessarily the quantity of townhomes; and there being no code limit to the number of bedrooms per unit.

Vice-Chair Williams asks if there are any further questions for staff; none respond. Vice-Chair Williams asks the applicant to speak.

Mr. Aaron Ferguson with Bancroft Design, 923 S. Lowry, comes to speak on the following:

- Here on behalf of the applicant.
- Believes the Planning Commission has heard pretty much most of it right now.
- Asks if there are any questions to the townhomes.

Vice-Chair Williams asks if there any plans for screening. Mr. Ferguson responses that there is requirements for screening in the city code; at this point, the architect has only given a conceptual site plan.

Discussion is held about potentially making screening a requirement; presumes questions or issues were addressed for those that previously came to speak at the last meeting; the Westwood neighborhood being very conscientious about their area; there being similar types of complexes on S. Walnut; some two-story and some three-story units; multiple apartment complexes in the area; and noted issue previously expressed was to have someone looking down on them and the conceptual drawing showing a three-story unit – other three story units are across the road.

Vice-Chair Williams asks if there are any further questions; none respond. Vice-Chair Williams opens the public hearing and asks if there is anyone else that wishes to speak in favor of this item; none respond. Vice-Chair Williams asks if there is anyone that wishes to speak in opposition of this time; none respond.

Vice-Chair Williams closes the public hearing and asks for staff to present findings and alternatives.

Mr. Brown returns to present findings and alternatives, which are:

Findings:

1. The Land Development Code allows Townhomes in the RSS or RT Districts.
2. Two-Family and Multi-Family District (RTM) and Multi-Family Intermediate (RMI) are located in the vicinity to the east and southeast along with various high-density further east of the subject property.
3. The proposed townhomes align with the Comprehensive Plan, which calls for Low-Density Residential for the subject property location.

Alternatives:

1. Accept findings and recommend that the City Council approve the specific use permit as presented.
2. Find that the specific use permit is not an appropriate use for the property based upon the impacts to the surrounding vicinity and do not recommend that the City Council approve the specific use permit.
3. Find that additional information or discussion is needed prior to making a recommendation and table the request to a certain date.

Staff recommends Alternative 1.

Vice-Chair Williams asks if there are any questions or comments.

Commissioner Prather moved to accept Alternative 1 to accept findings and recommend that the City Council approve the specific use permit as presented.

Vice-Chair Williams states he would like to add a screening requirement as parking in the rear of the development.

Discussion is held regarding conditions that can be placed on the Specific Use Permit such as the use, lot sizes, setbacks, height limits — is what you were speaking of — lighting, signage, landscaping, parking and loading capability, land use density, and other standard requirements; landscaping can be considered view blocking; placing conditions on this now or later; this item would not come back to Planning Commission if City Council approved the Specific Use; and the motion dies for lack of a second.

Vice-Chair Williams moved to accept Alternative 1 to accept findings and recommend that the City Council approve the specific use permit with the stipulation of a minimum fix (6) foot opaque fence be placed on the west side of the property.

Further discussion is held regarding the number of occupants in this three (3) story building with five (5) bedrooms; there being no code restriction for number of unrelated occupants outside of the Westwood Overlay district; potentially placing a restriction on the building height but not wanting to place that restriction on the developer; no one here this evening to speak in opposition of the use, height or occupant number; this location being seen as a transition; express concern on the number of occupants, parking and the impact on the surrounding neighbors; there being 15 parking spaces proposed for this development; only way to limit the number of occupants is to not approve the request.

Vice-Chair Williams moved to accept Alternative 1 to accept findings and recommend that the City Council approve the specific use permit with the stipulation of a minimum fix (6) foot opaque fence be placed on the west side of the property, Commissioner Prather seconds.

Roll Call:	Phillips	Williams	Prather	Shanahan	Peters
	Absent	Yes	Yes	Yes	No

Time: 19 minutes

4. ADJOURN

ADJOURNMENT. This regular meeting of the Stillwater Planning Commission was called for adjournment by Commissioner Shanahan, seconded by Commissioner Peters at approximately 6:15 PM on July 8th, 2025. The next regularly scheduled meeting will be held Tuesday, July 15th 2025 at 5:30 p.m. in the City Commission Hearing Room, Municipal Building, 723 South Lewis Street.

Prepared by – Cindy Gibson, Administrative Services Manager

Approved by - _____
Stillwater Planning Commission



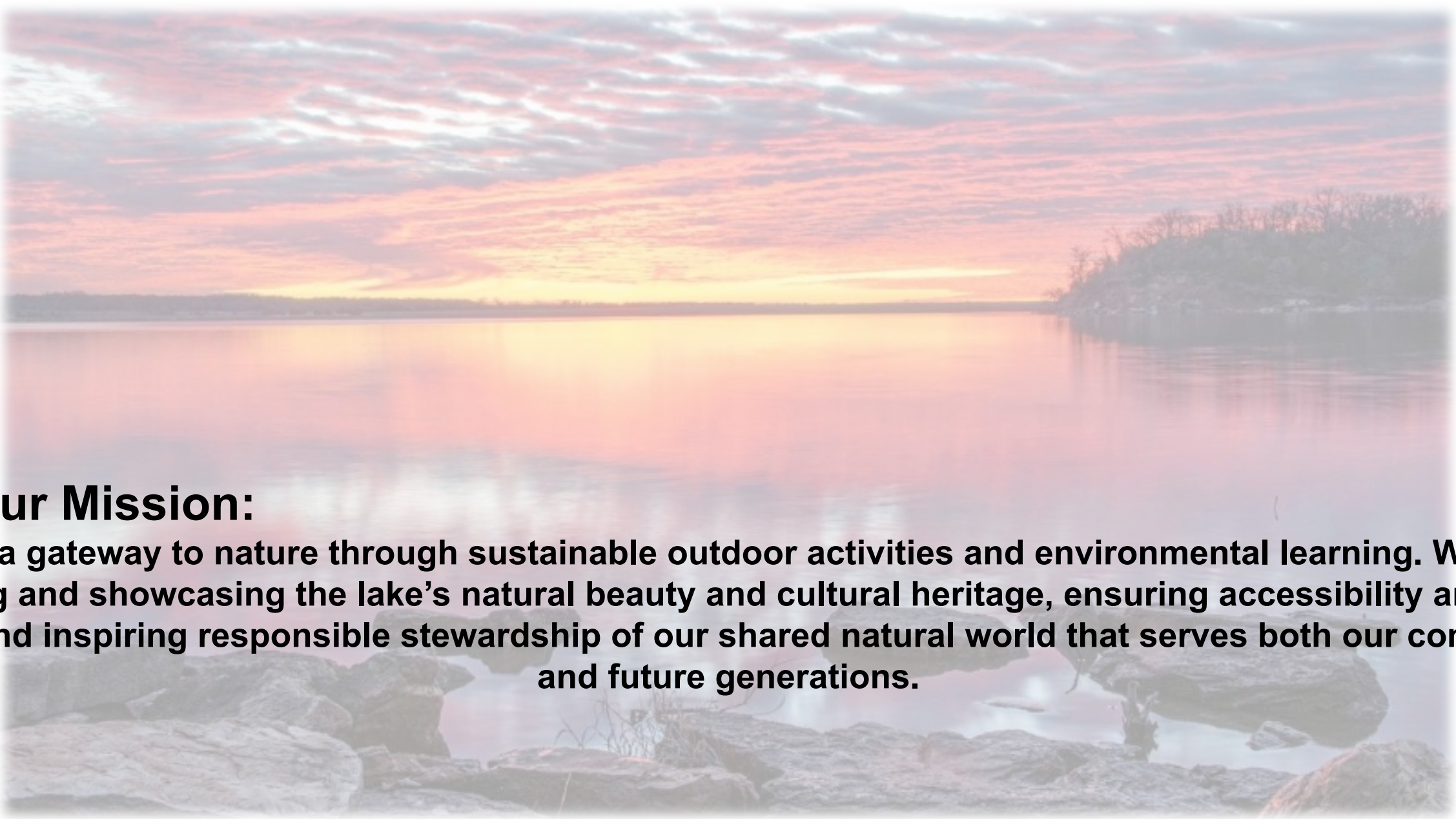
Lake McMurry Friends

FY 24/25

“One touch of nature makes
the whole world kin.”

-William Shakespeare

Presented by:
Jermie Fansler
Interim Executive Director
Lake McMurry Friends

A scenic sunset over a calm lake. The sky is filled with soft, wispy clouds in shades of orange, pink, and purple. The sun is low on the horizon, creating a bright glow that reflects on the water. In the foreground, there are dark, jagged rocks. On the right side, a small island with trees is visible in the distance.

Our Mission:

offer a gateway to nature through sustainable outdoor activities and environmental learning. We are preserving and showcasing the lake's natural beauty and cultural heritage, ensuring accessibility and enjoyment for all, and inspiring responsible stewardship of our shared natural world that serves both our community and future generations.

Lake McMurry FY 2024/25 YTD Visitors

Annual Pass Memberships 514

Day Visitors 30,000

RV & Tent Campers 14,418

Total Visits 44,418

Demographics

States Represented 40

OK Communities Represented 163





Most Common States Represented

Oklahoma

Texas

Kansas

Arkansas

Colorado



Most Common OK Communities Represented

Stillwater

Edmond

Guthrie

OKC

Enid

Perry

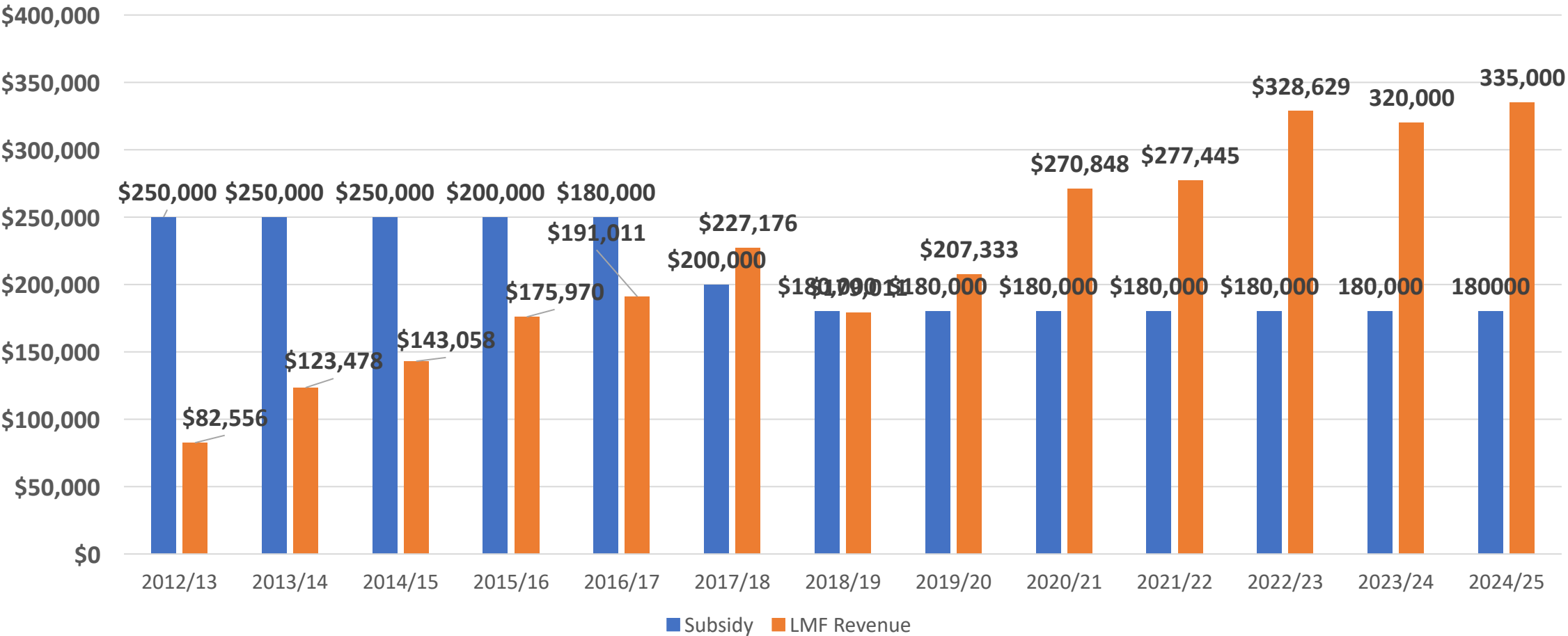
Tulsa

Perkins

Glencoe

Yukon

Lake McMurtry Friends/City of Stillwater Operating Partnership



Revenue FY 24/25
\$335,000

Programs

LAKE MCMURTRY FRIENDS
**BEGINNERS
BACKPACKING
CLINIC**

OVERNIGHT HIKE AND CLINIC

APRIL 23RD-24TH
REGISTRATION OPEN NOW

**BASIC
KAYAKING**

*July 30th @ 6:30pm
East Pavilion*

**See caption for more details*





- Ride to Thrive

Events



THE ORANGE DIRT TRAIL SERIES



lights on the lake
lake mcmurtry dec. 1st - dec. 17th
east recreation area 5pm-9pm
friday - sunday \$6 per vehicle

Powered By
  
VisitStillwaterOK.com



An aerial photograph taken from the perspective of someone inside a small aircraft. The view shows a wide, muddy-brown river winding through a landscape of dense green forests and patches of lighter green fields. The river has several meanders and smaller tributaries. In the foreground, the white fuselage and wing of the aircraft are visible, with the word "Semi" partially seen in the bottom right corner. The word "Questions?" is superimposed in the center of the image in a large, bold, black font.

Questions?

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	7.b. CC-25-131
Previous/Related Action:	
Background/Issue:	Stillwater's branding has shifted several times over the past two decades, resulting in multiple, inconsistent identities across the community. Establishing a cohesive brand will strengthen recognition, unify messaging, and better represent Stillwater to residents, businesses, and visitors.
Proposal/Solution:	A strong community brand is essential to highlight Stillwater's identity, attract visitors, and support local businesses. Since MERJE is already working with the City, Visit Stillwater, and community stakeholders on wayfinding, expanding the scope to include branding allows the City to leverage their expertise for a cohesive, efficient approach that strengthens both initiatives.
Financial Source/Impact:	Funding will come from the Communications O&M carryover from FY2025.
Related Strategic Priority:	#2 MOTIVATED MANAGEMENT #4 CONNECTED SPACES #5 UNIQUE CULTURE #6 ENGAGED & INVESTED RESIDENTS
Recommended Action/Motion:	Authorize the City Manager to approve the agreement with MERJE for professional branding design and planning.
Prepared By:	Dawn Dodson, Communications Director
Reviewed By:	Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. MERJE_Standard Agreement_Stillwater Branding.v3
2. EXHIBIT A_Scope and Fee Stillwater Branding Project.V2

1.0 PROJECT DATA

Design Consultant ("Designer" or "Design Firm"):

Found Design LLC (d.b.a. MERJE)
5 W. Gay Street
West Chester, PA 19380

Client & Owner: ("Client")

City of Stillwater
723 S. Lewis Street
Stillwater, OK 74074

Project:

CITY OF STILLWATER BRANDING PROJECT

2.1 DESIGNERS RESPONSIBILITIES

2.2 Scope of Services

Basic services for this project shall include the tasks outlined in the attached **Exhibit A, dated 08/6/25**. Design Firm represents to Client that Exhibit A, attached hereto and incorporated herein by reference, includes all of the Scope of Work by the Design Firm for this project.

2.3 Performance of the Services/Work; Project Completion

All services/work to be provided by the Design Firm shall be provided in a timely manner and without undue delay. In addition, all work/services provided by the Design Firm shall be done in accordance with applicable laws, rules and regulations, both Oklahoma and Federal.

All work/services provided by the Design Firm shall be of good quality and shall meet or exceed the standards of the Design Firm's profession. All services/work shall meet the goals and outcomes of the Project as stated by the Client.

Services shall be considered 100% complete after delivery and acceptance of the Identity Standards Manual. Any services required after this will be billed at the standard hourly rates or a separate proposal will be developed for a specific scope of work.

3.1 Revisions or Changes

Revisions include changes to previously approved work, changes in the extent of work or project parameters, changes in the complexity of any elements of the project, activities performed out of sequence, changes necessitated by strikes, schedule changes, client personnel changes, or other causes not within the designer's control.

3.2 Additional Design

Design of items not listed above nor outlined in Exhibit A such as signage, websites, environmental enhancements, exhibit design, miscellaneous items, etc.

4.1 CLIENT RESPONSIBILITIES

4.2 Appointment of a sole representative with full authority to provide or obtain any necessary information and approvals required by the designer.

4.3 Coordination of the decision-making process with parties other than the designer.

4.4 Timely communication of administrative or operational decisions if they affect the design or production graphic items; coordination of required public approvals and meetings.

4.5 Timely provision of accurate and complete information and materials requested by designer.

4.6 Provision of approved nomenclature; securing approvals for copy from third parties if necessary.

4.7 Provision of photographs, illustrations or other visual materials that are in a form suitable for reproduction without further preparation.

4.8 Final proofreading and written sign-off of all project documents including artwork, graphic patterns, graphic layouts, before their release for printing or digital applications. In the event that the client has approved work but errors, such as typographic errors or misspellings, remain in the finished product, the client shall incur the cost of correcting such errors.

4.9 Bid solicitation and contract negotiation. Establishment of final pricing and contract terms directly with printers, vendors or other third parties.

4.10 Establishment of specific invoicing procedures for the designer, which will ensure timely payments.

5.0 COMPENSATION

See **Exhibit A, dated 06/18/25**. The design and planning for this project will be completed for the fixed fee of **\$31,285**, plus estimated reimbursable expenses of **\$0** based on project proceeding concurrently with the Stillwater Wayfinding Program.

6.0 HOURLY RATES

All additional work request shall be Standard hourly rates are listed below and shall apply for 12 months from the date of this proposal.

Principal	\$ 165
Senior Designer	\$ 125
Project Designer	\$ 110
Junior Designer	\$ 85

7.0 REIMBURSABLE EXPENSES

In addition to the fees listed above, the design firm shall be compensated for reimbursable expenses including both in-house charges and outside expenditures made in the interest of the project. Examples of reimbursable expenses include film, processing, digital photos, typesetting, materials, reproductions, photocopies, laser prints, disks, scans, computer output, long-distance telephone charges, faxes, expressage, mileage at, 50¢/mile, parking, travel, out-of-town meals and lodging. Costs of services such as fabrication of models or mock-ups, renderings, printing, conventional or digital artwork/photography/illustration or retouching, whether performed in or out of house, shall also be considered reimbursable expenses. Cost of sign permits or plan reviews will be considered reimbursable expenses.

Reimbursable fees for this project are estimated at **\$0** and are in addition to the design and planning fees (see Exhibit A). Aggregated reimbursable expenses, which exceed the **\$0** estimate, shall require the prior written approval of the Client. The **\$0** amount is based on project proceeding concurrently with the Stillwater Wayfinding Program. Separating the project into different efforts may require additional fees for travel.

8.0 REIMBURSABLE AND IMPLEMENTATION ESTIMATES

Estimates provided at any time during the project for reimbursable expenses or implementation charges are for planning purposes only. They represent the best judgment of the design consultants, but shall not be considered a guarantee that project bids or costs will not vary or increase.

9.0 PAYMENT SCHEDULE

Invoices shall be submitted on a monthly basis. Invoices will be based on percent of work completed to date since previous billing.

Provided the services reflected upon such monthly invoice has been performed timely and in a satisfactory manner, payment is due upon receipt. Services reflected on an invoice for which Client makes no objection within 20 days of its receipt shall be deemed to have been performed in a timely and satisfactory manner. The designer reserves the right to temporarily suspend services when an invoice not objected to by Client is not paid within 120 days.

The designer shall be entitled to reimbursement of all costs incurred in collecting overdue accounts not paid within 120 days (those for which no objection was made) including, but not limited to, reasonable legal fees.

10.0 PROJECT DELAYS

If this project is suspended in whole or in part or delayed for causes not attributable to the Design Firm for 16 weeks or more, the designer reserves the right to charge a restart fee of 5% of the fee to accommodate the additional start/stop time or re-negotiate the fee to reflect any changes in hourly rates, expenses or project scope. In the case of project suspension, the designer shall be paid for all services performed and reimbursables expended to that date.

The designer will use his best efforts during design activities to meet the client's target dates. However, if there are delays in the project not attributable to the Design Firm, whether caused by the client, or others, the designer shall not be liable to the client for any expenses, lost profits or damages sustained as a result of these delays.

11.1 TERMS AND CONDITIONS

11.2 Arbitration

Project disputes in excess of the maximum limit of the jurisdiction of small claims court in Oklahoma arising out of this contract shall be submitted to binding arbitration in the County of Payne and the State of Oklahoma in accordance with the rules of the American Arbitration Association. The prevailing party shall be entitled to all arbitration and court costs and reasonable attorney's fees.

11.3 Assignment

Neither the client nor the designer may assign or transfer their interest in this agreement without the written consent of the other party.

12.0 ENTIRE AGREEMENT

This Agreement constitutes the entire Agreement between the parties and supersedes any prior or concurrent agreements, understandings, arrangements and negotiations. No amendment or modification of this agreement shall be valid or enforceable unless in writing and signed by the parties affected.

14.0 LIABILITY

Liability of the designer shall be limited to the total design fee for the project.

15.0 OWNERSHIP

All artistic expression, design concepts, sketches, notes, photographs, drawings, specifications, computer files and the right to create copies or derivative works there from shall remain the property of City of Stillwater whether the project for which they are made is executed or not.

Use of project documents or derivative works by the client on other projects outside of municipality, shall entitle the designer to further compensation equal to the original project fee unless otherwise agreed to in writing by both parties.

If the client reuses designs or specifications at any other time or in another location, the client shall hold the designer harmless against claims for loss or damages resulting from the failure of these designs encountered with such reuse..

16.0 OWNERSHIP/IDENTITY

Notwithstanding the foregoing, all final design work completed by the Design Firm for the Client for the Project shall be deemed work for hire, and upon payment of all fees and expenses, shall be the property of the Client. The Design Firm will sign such documentation as may be requested by the Client to memorialize the ownership of such final design work by the Client. The Client shall have the sole right to use the final design work (except the Design Firm may include such final design work in its promotional materials for its business development), and the sole right to apply for trademark registration and copyright registration for such final design work. Documentation will be delivered in digital form.

17.0 REPRESENTATIONS

The client represents that it has full power and authority to enter into this agreement and that it is binding and enforceable in accordance with its terms.

The design firm represents that it has full power and authority to enter into this agreement and that it is binding and enforceable in accordance with its terms. The design firm further represents that it has and will maintain sufficient capabilities, resources and staff to deliver high quality services on a short time frame and within budget, that it has and will maintain the economic resources to pay expenses in advance of reimbursement from the client, and that it has sufficient working capital, positive net worth, and has or can obtain a line of credit for the services to provided hereunder.

18.0 SALES AND USE TAX

The client shall pay to the Design Firm for remittance to the proper authorities any sales and use that may be applicable to the services provided under this agreement, including any sales and use tax that may be assessed on a subsequent audit of the designer's tax returns, but not any penalties arising from a failure of the Design Firm to properly report or timely remit payment of any sales or use tax to the proper authorities.

19.0 SEVERABILITY

All provisions of this Agreement are separate and divisible, and if any part is held invalid, the remaining provisions shall continue in full force and effect.

20.0 TERMINATION

Either party may terminate this agreement without cause after giving 10 days written notice.

In event of the termination of this contract by the Design Firm for cause, or by the Client without cause the designer shall be paid in full for all services performed up to the termination date, based on standard hourly rates, along with associated reimbursable expenses, not to exceed the agreed design fee. In such event, only final design work which has qualified for ownership under Paragraph 16.0 of this Agreement shall be deemed owned by the Client.

In the event this agreement is terminated by the Design Firm without cause, or by the Client for cause, the Client shall only be required to pay for those services which have been timely and satisfactorily performed, and for which no objection was made by the Client within the 20 day period described in Paragraph 9.0 above. Additionally in the event of termination by the Design Firm without cause, or the Client for cause, all design work which has been performed by the Design Firm for this Project (regardless of whether such design work is in draft form, is conceptual, or whether it is complete) shall be deemed to be final design work, and the terms and conditions governing final design work shall be deemed to apply.

The proposal, made on **08/6/25**, will become a binding contract when signed below by the client and design firm.

22.0 CREDITS

Credit to the design firm is required whenever the project is publicized. Credit should read: Design by MERJE, West Chester, PA

23.0 INDEMNIFICATION

To the extent permitted by Oklahoma law and without waiving any rights the Client has under the Oklahoma Governmental Tort Claims Act, the client shall defend, indemnify and hold the designer harmless from all suits, claims, judgments and liabilities of any kind whatsoever, including, without limitation, property damage and bodily injury or death, arising of this agreement or project by the client or designer due to any intentional or negligent acts, errors or omissions of the client or its agents, contractors or employees, including costs of litigation and attorney's fees.

The designer shall defend, indemnify and hold the client harmless from all suits, claims, judgments and liabilities of any kind whatsoever, including, without limitation, property damage and bodily injury or death, arising of this agreement or project by the client or designer due to any intentional or negligent acts, errors or omissions of the designer or its agents, contractors or employees, including costs of litigation and attorney's fees.

The client and designer shall, in the event of liability arising out of their joint negligence or willful misconduct indemnify, and save harmless each other in proportion to their relative degree of fault.

24.0 INSURANCE

The designer shall, at its own expense, purchase, maintain and keep in force during the term of this Agreement such insurance as set forth below. Designer shall not commence work under this Agreement until Designer has obtained all the insurance required under this Agreement and such MERJE Standard Agreement

7/23/25

insurance has been approved by Owner, nor shall Designer allow any of its consultants to commence work on any of its consulting agreements until all similar insurance of the consultant has been obtained and approved. Excepting any applicable errors and omissions policies of insurance which may cover the Designer, all insurance policies provided under this Agreement shall be written on an "occurrence" basis. The insurance requirements shall remain in effect throughout the term of this Agreement.

WORKER'S COMPENSATION: As required by law, with the policy endorsed to provide a waiver of subrogation as to the Owner, such policy of Employer's Liability insurance shall be for not less than \$100,000.00 for each accident and \$100,000.00 for disease (each employee), with a \$500,000.00 disease policy limit.

COMMERCIAL: Commercial general liability insurance, including Independent Contactor's Liability, Completed Operations and Contractual Liability, covering but not limited to any indemnification provisions in this Agreement, fully insuring Design Firm's liability for injury to or death of employees of Owner and third parties, extended to include personal injury liability coverage and for damage to property of third parties, with a combined bodily injury and property damage limit of \$500,000.00 per occurrence.

AUTOMOBILE: Automobile insurance, for vehicles used in performance of this Agreement, in minimum amounts as required by the State of Pennsylvania.

The client may request certificates of insurance as evidence of coverage. The policy limits for errors and omissions shall include costs of defense including reasonable attorneys' fees.

26.0 THIRD PARTY AGREEMENTS

The client grants to the designer the right to act on the client's behalf to contract with or give instructions to any person involved in the project, such as photographers, illustrators or writers. The designer agrees to review with the client for approval any terms and conditions, including required credits that may be imposed on the client or designer by such third parties.

27.0 GOVERNING LAW AND VENUE

This Agreement shall be construed according to the laws of the State of Oklahoma. The venue for all arbitration or litigation shall be the State of Oklahoma.

28.0 PROPOSAL ACCEPTANCE

Accepted by Client/Owner:

Signature

Date

Printed Name

Date

Accepted by Designer:

John F. Bosio
Partner
Found Design LLC (d.b.a. MERJE)

Date



August 6, 2025

Brady Moore
City Manager
City of Stillwater
723 S. Lewis St.
Stillwater, OK 74074

RE: PROPOSAL FOR CITY OF STILLWATER BRANDING

Dear Brady,

Thank you for the opportunity to be considered for the City of Stillwater's branding initiative.

Pairing the branding effort with the City's wayfinding program presents a strategic and efficient approach - aligning shared goals and reinforcing each other's impact. This initiative will serve as the foundation for a comprehensive city-wide identity, designed to strengthen community recognition and build greater awareness of Stillwater's distinct character.

Through this project, the City will be equipped with a unified branding strategy that consistently communicates a single voice across all platforms. We propose the following Scope of Work **and have noted where certain tasks and visits would be a shared effort with the wayfinding process.**

SCOPE OF WORK

MERJE will apply a four-step process encompassing strategy, planning, design, and implementation. This structured approach ensures steady progress throughout the project while allowing the flexibility to address the unique challenges and opportunities specific to this effort.

As we discussed, some of these tasks can be completed as a shared effort during the development of the wayfinding program, I have noted these per task.

Task 1: Information Gathering

Task 1.1: Kick Off Meeting: MERJE will meet with the Steering Committee to discuss overall project process and goals and initiate Discovery. **(TRIP #1) (Shared / with Wayfinding)**

Task 1.2 Tour of project area **(TRIP #1) (Shared / with Wayfinding)**

Task 1.3 STAKEHOLDER INTERVIEWS: A series of working meetings with the Steering Committee ; Stakeholders and a Public Presentation to review the brand initiative.
(TRIP #1) (Shared / with Wayfinding)

RESEARCH METHODOLOGY: Interviews will include a branding discussion, image survey, wordplay exercise, visual surveys, personality tests, design criteria development, first impressions questionnaire, and target market analysis. Research will also include an analysis of competitors, best practice case studies and identification of benchmark features.

Task 1.4 Brand Study Report: Upon completion of the Discovery Kick-Off and Stakeholders/User Group interviews, MERJE will compile the results in graphic form, including charts, info graphics and word clouds. This document is a visual representation of the conversations and graphic exercises. This will provide a basis for the brand design and personality.

Task 1.5 Present Brand Study Report to client. (virtual)

Task 2: Schematic Design

Task 2.1 Schematic Design: Based on the information gathered during the Branding Discovery Phase, MERJE will develop ideas for the identity family and visual branding elements.

Task 2.2 Early “concepts” ideas will be presented to the client’s Project Manager and 1 or 2 others for initial input. (Design Submission #1) (Virtual) (Shared / with Wayfinding)

Task 2.3 Base on early concepts, 3 Schematic Design options shall be presented to the Steering Committee and Stakeholders (Design Submission #2) (TRIP #2) (Shared with Wayfinding)

The design will consider all aspects of the brand, as well as all potential expressions, physical applications and technological approaches.

The presentation will include (3) distinct identity concepts and taglines, with applications to wayfinding and various communication tools. The presentation will include, logos, imagery, color palettes, patterns, typography, etc.

Task 3: Design Development

Task 3.1: Based on comments received a basis for design will be established and the brand shall be refined, along with wayfinding elements.

Task 3.2 Design Development Presentations to the Steering Committee and the Stakeholders. (Design Submission #3) (TRIP #3) (Shared / with Wayfinding)

Task 3.3 Based Steering Committee feedback, make minor revisions and receive final approvals. (Design Submission #4)

Task 4: Graphic Standards Manual

Task 4.1 Branding Standards Manual: Based on the final selected design MERJE will prepare a draft Standards Manual for uniform use of brand logo.

The 50% draft will be presented to Steering Committee and selected group of key stakeholders for review and comment. (Virtual Meeting)

Task 4.2 A 90% document will be presented to the Steering Committee and other approving groups for final comments and adoption (TRIP #4) (Shared / with Wayfinding)

Task 4.3 Based on comments received from the Steering Committee and other approving groups, the Brand Standards Manual will be finalized, including all editing, design revisions and guidelines.

Task 4.4 100% Branding Strategy Manual: A final version of the Brand Standards will be submitted. The following items will be included :

A) Logo and Tagline	Standard
B) Letterheads, Envelopes, Business Cards.	Standard
C) Web visuals and advertising	Guideline
D) Marketing: Advertisements, Brochures, etc.	Guideline
E) Promo Products: Book Bags, Water Bottle, etc.	Guideline
F) Operational Products: Vehicle Graphics, Uniforms, etc.	Guideline

Task 4.5 Provide a Implementation Strategy: Roll-Out Strategy, Identify Priority Projects, Final Cost Estimate and Phasing Plan

ANTICIPATED PROJECT SCHEDULE

1. Information Gathering	4 – 8 weeks
2. Schematic Design	6 – 8 weeks
<i>Client Feedback and Approval to Proceed with next step</i>	<i>2 – 4 weeks</i>
3. Design Development	6 – 8 weeks
<i>Client Feedback and Approval to Proceed with next step</i>	<i>2 – 4 weeks</i>
4. Graphic Sign Standards Manual	6 – 8 weeks

COMPENSATION

Thank you for considering MERJE for the development of the City of Hillsboro Park Entry Signage. I hope you have found the Scope of Work to be reflective of your requirements and expected deliverables. Based on the scope of the project, we propose the following Compensation:

<u>BASE PROJECT</u>	<u>FEE</u>
1. Information Gathering	\$ 5,830
2. Schematic Design	\$ 8,990
3. Design Development	\$ 3,240
4. Graphic Sign Standards Manual	\$ 13,225
Travel Reimbursables	<u>\$ 0</u>

BASE PROJECT \$ 31,285

REIMBURSABLE EXPENSES

Reimbursable expenses are in addition to the basic compensation outlined above and will be billed to the client at 1.0 times the expenses incurred by MERJE and our consultants in the interest of the project, including airfare, lodging, meals or mail services will be required for this project.



HOURLY RATES

Principal In Charge	\$ 165
Senior Designer	\$ 125
Graphic Designer	\$ 115
Jr. Designer	\$ 90

POTENTIAL ADDITIONAL SERVICES

The following items are potential additional services, and if authorized by the client, a separate proposal will be developed to address a specific project requirement.

- Separating the project out as a separate effort from the Wayfinding initiative that results in additional visits to Stillwater, may result in additional fees for time and travel reimbursables.
- Website, Mobile Applications or other digital tools

We appreciate you considering MERJE to provide the design services for this project. If you have any questions regarding the above, please feel free to contact me. If you find everything in order in this proposal, please indicate your acceptance by signing and returning a copy of this letter.

Thank you very much for the opportunity. We look forward to working with you on this project

Sincerely,

John F. Bosio
Principal
MERJE

APPROVED BY:

Signature

Date

Print Name

Title

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	8.a. CC-25-132
Previous/Related Action:	CC-24-112 CC-25-47
Background/Issue:	The Emergency Management Department, on behalf of the City of Stillwater, is updating the current hazard mitigation plan (HMP). This plan, expires every five years, is essential for applying for state and most federal grants. It is aimed at mitigating the impact of natural disasters and climate change on our community. The City of Stillwater contracted with WSB, LLC, formerly, Meshek & Associates, LLC, to update, re-write and provide the plan for the City and the community.
Proposal/Solution:	City Council approve the proposed resolution adopting the Hazard Mitigation Plan, as approved by the Oklahoma Department of Emergency Management and FEMA Region VI.
Financial Source/Impact:	Total Hazard Mitigation Plan project costs are \$182,345.98. FEMA will reimburse up to 75% of the cost under the pending grant agreement, which is \$136,759.49, The City's out-of-pocket cost will be \$45,586.50. Through the Sub-recipient Management Costs portion of the grant, we are eligible to receive an additional \$9,117.29 at a 100% federal cost-share, meaning no additional City funding is required.
Related Strategic Priority:	#3 SAFE COMMUNITY #6 ENGAGED & INVESTED RESIDENTS #1 EFFECTIVE SERVICES & ACCOUNTABLE GOVERNMENT
Recommended Action/Motion:	City Council approve a resolution adopting the Hazard Mitigation Plan, as approved by the Oklahoma Department of Emergency Management and FEMA Region VI.
Prepared By:	Rob Hill, Director of Emergency Management
Reviewed By:	Rob Hill Christy Driskel Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. 2025-23 Hazard Mitigation Plan
2. 2025 City of Stillwater Hazard Mitigation Plan (2)

RESOLUTION NO. CC-2025-23

A RESOLUTION ADOPTING THE 2025 CITY OF STILLWATER HAZARD MITIGATION PLAN

WHEREAS, the 2025 City of Stillwater Hazard Mitigation Plan has been prepared in accordance with the requirements of section 322 of the Stafford Act, as amended by the Disaster Mitigation Act of 2000 (42 U.S.C. § 5165), section 1366 of the National Flood Insurance Act of 1968 (42 U.S.C. § 4104c), and 44 C.F.R. §§ 201.1 and 201.6; and

WHEREAS, the purpose of mitigation planning is for local governments to identify the natural hazards that impact them, to identify actions and activities to reduce any losses from those hazards, and to establish a coordinated process to implement the plan, taking advantage of a wide range of resources; and

WHEREAS, the City of Stillwater has gathered information and prepared the 2025 City of Stillwater Hazard Mitigation Plan with assistance from city staff, community partners, and the City's consultant WSB's Hazard Mitigation Planning Team; and

WHEREAS, the City of Stillwater has provided opportunity for the public to comment on the plan during the drafting stage and prior to plan approval through an online public survey posted in March 2025 and Stakeholder Workshops held on April 3, 2025 and June 17, 2025; and

WHEREAS, the 2025 City of Stillwater Hazard Mitigation Plan has been submitted to the State Hazard Mitigation Officer for initial review and is pending formal review and approval from the FEMA Regional Office; and

WHEREAS, the City of Stillwater has reviewed the 2025 City of Stillwater Hazard Mitigation Plan and affirms that the plan will be updated no less than every 5 years.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF STILLWATER THAT:

Section 1: The City of Stillwater adopts the 2025 City of Stillwater Hazard Mitigation Plan, as approved by the State Hazard Mitigation Officer and FEMA, as its local hazard mitigation plan.

Section 2: That the 2025 City of Stillwater Hazard Mitigation Plan will be maintained and available for inspection at the Norman McNickle Municipal Complex Office of the City Clerk and the City of Stillwater website.

PASSED AND ADOPTED THIS 8TH DAY OF SEPTEMBER 2025.

CITY OF STILLWATER, OKLAHOMA
a Municipal Corporation

WILLIAM H. JOYCE, MAYOR

(SEAL)
ATTEST:

TERESA KADAVY, CITY CLERK

APPROVED AS TO FORM AND LEGALITY THIS 8TH DAY OF SEPTEMBER 2025.

KIMBERLY CARNLEY, CITY ATTORNEY



2025 Hazard Mitigation Plan

FOR CITY OF STILLWATER, OKLAHOMA



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- Appendix B Planning Process Documentation
- Appendix C Demographic Information
- Appendix D Dam Inundation Maps
- Appendix E Critical Facilities



Chapter 1 INTRODUCTION

Summary of Changes

Changes in this chapter include:

- Discussion of People reframed as Demographics and moved to Appendix C
- Discussion of Previous Development and Changes in Land Use expanded and moved to Chapter 6

1.1. Overview of Planning Area

This 2025 Multi-Hazard Mitigation Plan Update for the City of Stillwater fulfills the requirements for NFIP's Community Rating System Plan (CRS), and all FEMA required plan update criteria. This plan addresses natural and manmade hazards that can affect people and property in the City of Stillwater.

1.1.1. General Information and History

The City of Stillwater is located in Payne County in north-central Oklahoma. Positioned at the intersection of U.S. 177 and Oklahoma State Highway 51, Stillwater has a population of 48,818 residents¹. The city is approximately 50 miles northeast of Oklahoma City and 60 miles west of Tulsa. Stillwater is home to the main campus of Oklahoma State University (OSU), a research university within the Oklahoma State Regents for Higher Education with a student body population of over 26,000 students².

Stillwater was officially established in April of 1889, though a short lived "Boomer" settlement had been established in the area in 1884. OSU was founded in 1890 as Oklahoma Agricultural and Mechanical College. For most of its history, Stillwater has been an agricultural community and university town.

Boomer Lake was built in 1927 and expanded in 1932 for water supply and power generation. Lake Carl Blackwell was constructed in the late 1930s and later deeded to the University. Lake McMurtry, which is owned by the City, was constructed in 1971 for water supply, flood control, and recreation.

1.1.2. Critical Facilities

Critical facilities are structures and institutions necessary for a community's response to and recovery from emergencies and must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery. A complete list of critical facilities in the City of Stillwater is included in Appendix A.

1.1.3. Climate

Stillwater has an annual average temperature of 60.4° F and average precipitation of 37.97 inches. Summer temperatures exceed 100° F for 14 days each year on average and can be accompanied by high humidity. Stillwater experiences convective thunderstorms which contribute to much of the City's annual rainfall. On average, Stillwater receives 6.3 inches of snowfall per year, which most frequently occurs between December

¹ Data obtained from the U.S. Census American Community Survey, 2023.
<https://data.census.gov/table/ACSDP5Y2023.DP05?q=Stillwater+city,+Oklahoma>

² <https://go.okstate.edu/about-osu/fast-facts/>



and March. January is the coldest month on average, with an average high of 49°F and an average low of 26°F.

Severe weather, including high winds, hail, heavy rain and flooding, and tornadoes, can occur any time during the year, but most commonly occurs between March and July.

1.1.4. Geography

Stillwater's incorporated area spans 29.5 square miles³. Stillwater is located in the Cross Timbers Transition, an ecoregion of forest and prairie transitioning from the drier plains of the west to the wetter forests of the east. Native vegetation ranges from grasses such as bluestem, switchgrass, and Indiangrass to woody plants such as oaks, hickory, cottonwood and elm.

Stillwater is also crossed by several streams and creeks and includes several lakes. Stillwater Creek flows southeast through the southern portion of the city, while Boomer Creek flows south out of Boomer Lake.

Landcover in Stillwater is urbanized in the City's central area with a mixture of grasslands and agriculture around the periphery, with a mixture of forests in riparian areas.

1.1.5. Infrastructure

Infrastructure systems are critical for life safety and economic viability and include transportation, power, communication, water and wastewater systems. Many critical facilities depend on infrastructure to function. For example, hospitals need electricity, water, and sewers to continue aiding patients. As with critical facilities, the continued operations of infrastructure systems during and following a disaster are key factors in the severity of impacts and the speed of recovery. Water, sanitary sewer, and stormwater services are provided by the City. Electricity is provided by a public enterprise, Stillwater Electric Utility, which purchases bulk electricity through the Grand River Dam Authority (GRDA). Natural gas service is provided by Oklahoma Natural Gas. LifeNet provides emergency medical services.

1.1.6. Economy

After a disaster, economic resilience drives recovery. Stillwater has specific economic drivers that are important to understand when planning to reduce the impacts of hazards and disasters to the local economy. Stillwater's largest industries⁴ are educational services, health care and social assistance, and accommodation and food services.

³ https://data.census.gov/profile/Stillwater_city,_Oklahoma?g=160XX00US4070300

⁴ Data sourced from U.S. Census Bureau, 2023 ACS 5-year Estimate



1.2. Participating Jurisdictions

Element A1-b. Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?

Participating in the 2025 City of Stillwater Multi-Hazard Mitigation Plan Update is the City of Stillwater. Representatives from various City departments attended meetings during the planning process and comprised the core planning team. Details on who participated in the planning process and how are outlined in Chapter 2.

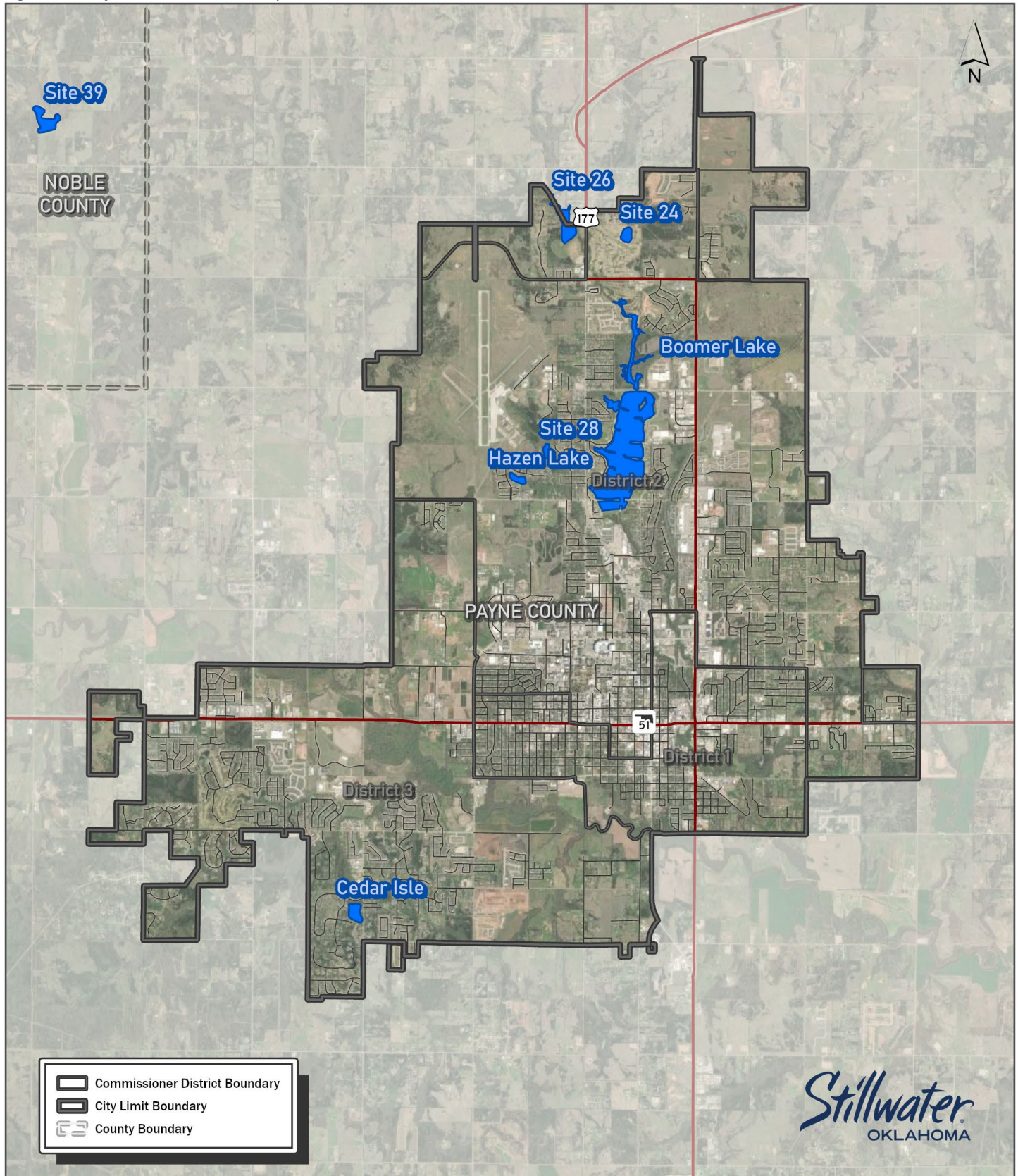
Stillwater Public Schools has withdrawn their participation in this plan update. Their participation in the City's hazard mitigation efforts will be reevaluated at the next update in 2030.

1.2.1. Purpose and Scope

The overall goal of the City of Stillwater Multi-Hazard Mitigation Plan is to create a disaster-resistant community and improve the safety and well-being of Stillwater by reducing deaths, injuries, property damage, environmental and other losses from natural and technological hazards in a manner that advances community goals, quality of life, and results in a more livable, viable, and sustainable community.



Figure 1-1 City of Stillwater Base Map





Chapter 2 PLANNING PROCESS

Summary of Changes

Changes in this chapter include:

- Sections devoted to discussions on individuals involved in the planning process, including the public, were created to expand on the details of each
- A section discussing the plans, documents, and literature reviewed and incorporated into this plan was created

2.1. Overview of the Planning Process

Element A1-a. Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved?

Element F1-a. Does the participating jurisdiction include documentation of adoption?

Planning for this plan update followed a ten-step process, based on guidance and requirements of FEMA⁵ and the Community Rating System (CRS):

1. Organize to prepare the plan
2. Involve the public
3. Coordinate with other agencies and organizations
4. Assess the hazard
5. Assess the problem
6. Set goals
7. Review possible activities
8. Draft the action plan
9. Adopt the plan
10. Implement, evaluate, and revise

Documentation of adoption of this plan by the City of Stillwater is appended to the beginning of this document, before the Table of Contents and in addition to the official letter of approval issued by FEMA.

2.1.1. Step 1 – Organize to Prepare the Plan

Funding for this update was secured by the City of Stillwater through the Hazard Mitigation Grant Program. Upon receiving the Notice to Proceed, the Director of Emergency Management for the City of Stillwater met with a representative from the contractor procured by the City to develop the update to this plan to formulate the strategy to update this plan. Another item discussed during this meeting include identification of jurisdictions participating in this plan update and identifying individuals from each jurisdiction who can serve as representatives to the Core Planning Group and others who can serve as Stakeholders. These individuals, as well as the organizations they represent, are outlined in Sections 2.2 and 2.3.

⁵ <https://www.fema.gov/hazard-mitigation-planning-process>



Table 2-1 Meeting Schedule

Meeting	Date	Agenda Topics
Kickoff	March 12, 2025	Review of 2020 Action Items Discuss floodplain management program Outline meeting schedule and identify core and stakeholder groups Identify participating jurisdictions Discuss and assess current capabilities
Stakeholder/Core 1 Meeting	April 3, 2025	Mitigation Goals Hazard Ranking Capabilities and Vulnerabilities Discussion Review of 2020 Mitigation Action Items Discussion of new Mitigation Action Items GIS Mapping Presentation Grant Funding Presentation
Planning and Technology Meeting	May 29, 2025	Occurrences of Select Hazards since 2020 Capabilities Discussion Action Items Discussion Public Education and Outreach for Planning Process Technology Presentation and Discussion
Stakeholder Workshop #2	June 17, 2025	GIS Presentation Capabilities and Participation – Stillwater Public Schools Integration into Other Planning Mechanisms HMP Adoption and OEM/FEMA Review Process Public Education and Outreach 2025 Mitigation Action Items
Core Planning Committee #2 Meeting	July 29, 2025	Public Engagement Discussion GIS Discussion HMP Status Update HMP Adoption Discussion

A completed final draft was furnished to the public for their review and feedback on August 8, 2025, for a period of 7 days, after which time the plan was submitted to the Oklahoma Department of Emergency Management (OEM) and FEMA for review and approval by each agency.

2.1.2. Step 2 – Involve the Public

All meetings of the All-Hazard Whole Community Planning Group were open to the public and posted on Stillwater Emergency Management website and social media outlets. Public attendance and engagement was accomplished throughout the planning process by extending invitations to residents to attend Stakeholder Workshops, which provided the public opportunities to provide input on how hazards impact them. Solicitation of public opinion on the draft Hazard Mitigation Plan was solicited prior to submittal of this document to the



State of Oklahoma Emergency Management (OEM) office. Such feedback was incorporated into the Risk Assessment prior to submitting the plan to OEM.

Additionally, a survey posted in March 2025 was developed to garner feedback from the public, stakeholders, and City officials. Promotional materials marketing this survey were posted online on the City's Emergency Management website as well as on social media accounts. Printed flyers were also posted in City Hall.

Section 2.4 mirrors this discussion and includes more information about public involvement in the development of this plan. Section 5.1 discusses how participating jurisdictions will continue to foster public involvement in the period between the approval of this plan and the initiation of the planning process for the next update.

2.1.3. Step 3 – Coordinate with Other Agencies and Organizations (Stakeholders)

Stakeholders were contacted and invited by email and phone and are considered a part of the Stakeholder Planning Group. In addition to garnering feedback through the survey, stakeholders were interviewed to review their existing studies, reports, and technical information and their needs, goals, and plans for the area. Most stakeholders attended meetings, where their insight and expertise was provided in an effort to review the existing 2020 Stillwater Hazard Mitigation Plan. Determinations of what is still relevant, assessment of the identified hazards and resulting problems associated with each hazard, review appropriate mitigation measures and draft an action plan were also performed. Participating stakeholders in this 2025 Update are included in Table 2-3. Public and stakeholder participation in the planning process provided critical information on the vulnerability of the City to each hazard, which assisted in creating the risk assessment. Input also facilitated creating and prioritizing mitigation strategies into the Action Plan.

2.1.4. Step 4 – Assess the Hazard

Data on hazards which affect Stillwater was collected from available sources, the 2020 Stillwater Hazard Mitigation Plan, and the 2024 State of Oklahoma Hazard Mitigation Plan. The Hazard Identification and Risk Assessment, Chapter 3, includes a description of the type, location, and extent of natural hazards that can affect Stillwater. Information on previous occurrences of hazard events and the probability of future events is also included in the plan. The Simple Planning Tool for Oklahoma Climate Hazards, produced by the Southern Climate Impacts Planning Program (SCIPP, www.southernclimate.org), was used for the hazard assessment, as well as the vulnerability and risk assessment for each hazard.

More details on this step, and the assessment of each hazard profiled in this plan, can be found in Chapter 3.

2.1.5. Step 5 – Assess the Problem

How hazards affect public safety, health, buildings, transportation, infrastructure, critical facilities, the natural environment, endangered species, and the economy were all considered in the development of this plan.

Data from NOAA National Centers for Environmental Information were incorporated into this plan, primarily for weather-related hazards, to document the magnitude, frequency, amount of property damage, and the number of injuries and deaths for each hazard's occurrence within the community. Additional sources considered and analyzed include:

- 2020 City of Stillwater Hazard Mitigation Plan Update
- 2008 City of Stillwater Annexation Plan
- 2023 Boomer Creek Master Drainage Plan
- 2030 C3 Comprehensive Plan
- 2024 Stillwater Data Center Economic Development Project Plan



- Stillwater Watershed Management Plan
- 2021 Stillwater Stormwater Management Program
- Stillwater Transportation Enhancement Plan

A comprehensive list of all data sources and references used in the development of this plan can be found in Table 2-5 and Table 2-6.

2.1.6. Step 6 – Set Goals

Project and community hazard mitigation goals and objectives for Stillwater were verified and/or modified as appropriate to guide the development of the plan. Goals for this plan, and for mitigation strategies and efforts for the planning area, are listed in Chapter 4.

2.1.7. Step 7 – Review Possible Activities

Possible mitigation activities identified in the 2020 plan were modified in Chapter 4 of this Update to conform to current Mitigation Action guidelines, obtained from the Local Mitigation Planning Policy Guide, FEMA, updated April 2023⁶, and include:

- Local plans and regulations
- Structural and infrastructure projects
- Natural systems protection, and
- Education and outreach programs

Status updates on the implementation of mitigation actions identified in the 2020 plan have been included in Section 6.3.

2.1.8. Step 8 – Draft the Action Plan

Constituting the Action Plan are the revised high-priority Mitigation Measures. Each measure was further detailed to identify:

- A brief description of the Mitigation Measure (Action Plan Item)
- Lead agency responsible for its implementation
- Anticipated time schedule for completion
- Estimated project cost
- Possible sources of funding, and
- Expected outcome, or work product

These actions are included in Section 4.5.

2.1.9. Step 9 – Adopt the Plan

Review and approval of the final draft of the 2025 City of Stillwater Multi-Hazard Mitigation Plan Update was conducted by the Core Planning Committee. Upon approval, this plan was made available to the public for review and feedback. Afterward, it was sent to Stillwater City Council for approval and adoption and forwarded to the Oklahoma Department of Emergency Management for review, followed by final approval by FEMA Region VI. Signed letters and resolutions of adoption are located at the beginning of this document and serve as confirmation that the City has formally agreed to adopt the 2025 City of Stillwater Multi-Hazard Mitigation Plan Update.

⁶ https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-policy-guide_042022.pdf



In continuation of the comprehensive planning process, the City of Stillwater Core Planning Committee will continue to remain active after receiving approval of this plan and will actively maintain it and implement mitigation actions in the period between adoption and the initiation of the activities for the next plan update to enhance resilience to natural hazards. City departments, community agencies, and private partners will assist with implementation.

2.1.10. Step 10 – Implement, Evaluate, and Revise

Adoption of the 2025 City of Stillwater Multi-Hazard Mitigation Plan is only the beginning of this effort. Community offices, other agencies, and private partners will proceed with implementation. The Committee will continue to meet on a regular basis to monitor progress, evaluate activities, and periodically recommend revisions to the Plan and Mitigation Action Items. These findings and recommendations will be included in the annual report prepared under the direction of the Committee. The plan will be formally updated at a minimum of every five years, as required by FEMA. The Stillwater Emergency Management Director is responsible for updating the Hazard Mitigation Plan and submission to the state and FEMA for approval. More on this step can be found in Chapter 5.

2.2. Planning Committee Members

Element A1-b. Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?

All individuals on the Planning Team who participated in the planning process and contributed to the development of this plan are listed in Table 2-2. Attendance by each individual at meetings throughout the planning process can be found in Appendix B.

Table 2-2 Planning Committee Team Members

Name	Title	Participating Jurisdiction Represented	Contribution to Planning Process
Rob Hill	Director of Emergency Management	City of Stillwater	Attend and participate in meetings Serve as primary Point of Contact for Planning Process
Brenden Pope	Deputy Director of Emergency Management	City of Stillwater	Attend and participate in meetings
Barbara Bliss	Director of Community Resources	City of Stillwater	Attend and participate in meetings
Bill Millis	Deputy Director of Engineering	City of Stillwater	Attend and participate in meetings
Bo Gamble	Assistant Superintendent of Operations	City of Stillwater	Attend and participate in meetings
Brad Stewart	IT Director	City of Stillwater	Attend and participate in meetings
Brandon Halcomb	Assistant Fire Chief	City of Stillwater	Attend and participate in meetings



Name	Title	Participating Jurisdiction Represented	Contribution to Planning Process
Candy Staring	Director of Engineering	City of Stillwater	Attend and participate in meetings
Christy Driskel	Deputy City Manager	City of Stillwater	Attend and participate in meetings
Cody Manuel	1 st Watch Patrol Lieutenant	City of Stillwater	Attend and participate in meetings
David Barth	Director of Development Services	City of Stillwater	Attend and participate in meetings
David Casey	Emergency Management Technician	City of Stillwater	Attend and participate in meetings
Dawn Dodson	Director of Communications	City of Stillwater	Attend and participate in meetings
James Driskel	Water Utilities Director	City of Stillwater	Attend and participate in meetings
Jeff Matthews	Building and Fire Code Services Director	City of Stillwater	Attend and participate in meetings
Jim Scott	Parks and Facilities Manager	City of Stillwater	Attend and participate in meetings
Loren Smith	Director of Electric Utility	City of Stillwater	Attend and participate in meetings
Mark White	Director of Public Works	City of Stillwater	Attend and participate in meetings
Matt Faulkner	Director – Waste Management	City of Stillwater	Attend and participate in meetings
Rachel Wasserman	Supervisor – Animal Welfare	City of Stillwater	Attend and participate in meetings
Terry Essary	Fire Chief	City of Stillwater	Attend and participate in meetings
Zack Henson	Watershed Quality Manager	City of Stillwater	Attend and participate in meetings

2.3. Stakeholders

Element A2-a. Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity?

As discussed in Section 2.1, notices and invitations for participation and comment were disseminated to local agencies, businesses, and other participants in the planning process. Further details on these stakeholders have been provided in Table 2-3 and Table 2-4.



Table 2-3 Stakeholders – Neighboring Communities, Businesses, and Non-Profit Agencies Contacted

Name	Title	Agency Represented	How Agency Was Contacted/Invited to Participate
Alane Zannotti	President & CEO	Stillwater Chamber of Commerce	Email
Dan Ray	Police Captain	Oklahoma State University Emergency Management	Email
Kellie Reed	Airport Director	Stillwater Regional Airport	Email
Pierce Taylor	Director	Payne County Emergency Management	Email
Rachael Condley	Executive Director	Our Daily Bread	Email
Anita Kaufman	District Manager	Payne County Conservation District	Email
Billy Treadwell	Director, Safety, Security, & EVS – Hospital Safety Officer	Stillwater Medical Center	Email
Cristy Morrison	President & CEO	Visit Stillwater	Email
Daniel Nack	Deputy	Payne County Sheriff's Office	Email
Seth Condley	County Commissioner, District #2	Payne County Commission	Email

Table 2-4 State and Federal Agencies Contacted

Name	Title	Agency Represented	How Agency Was Contacted
Alexander Greenwich	Local Emergency Response Plans Specialist, District #3	Oklahoma State Department of Health	Email
Logan Anderson	Stillwater Residency	Oklahoma Department of Transportation	Email
Lisa Robinson	Northeast Regional Coordinator	Oklahoma Department of Emergency Management	Email



Name	Title	Agency Represented	How Agency Was Contacted
Jonathan Harrold	Superintendent, Payne County Maintenance #60	Oklahoma Department of Transportation	Email
Brantley Hendrex	Assistant District Engineer of Maintenance Rural, Field District 4	Oklahoma Department of Transportation	Email

2.4. Public Involvement

Element A3-a. Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan?

As discussed in Section 2.1.2, public involvement was garnered through two primary methods: an online survey and invitations to Stakeholder Workshops.

Designed to acquire feedback from the public, as well as City officials, the public survey was posted online in March 2025 and advertised online on the City's Emergency Management website as well as social media accounts. This survey remained active and accessible throughout the development of the plan, which concluded in August 2025. Printed flyers were posted in City Hall to promote it and social media postings complemented the physical postings. Subsequently, information from this survey and gathered from local officials and stakeholders were incorporated into the Vulnerabilities and Impacts assessments for each corresponding hazard in Chapter 3, as well as the Capabilities Assessment in Chapter 4, as appropriate.

All meetings conducted during this planning process were posted as open meetings at City Hall and the City's website and social media. Invitations to Stakeholder Workshops as a part of the planning process for this plan's development were extended to City residents. Those who attended engaged in discussions and provided input and feedback on how hazards have impacted them over the preceding 5 years. For those who were unable to attend the in-person meeting, a virtual component was made available through Microsoft Teams to ensure inclusion of the greatest number of participants possible. Meetings were promoted through flyers physically posted in Stillwater City Hall, as well as social media and online postings on the City's social media and website. Additionally, the Stillwater Chamber of Commerce promoted the final draft of the plan on their website, directing residents to where they can find the plan to review it.

Methods discussed in this section to encourage public involvement in this planning process were implemented to ensure inclusion of all residents in the planning area and to garner their input and feedback into this document.

2.5. Plans, Documents, and Literature Reviewed

Element A4-a. Does the plan document what existing plans, studies, reports, and technical information were reviewed for the development of the plan, as well as how they were incorporated into the document?

Relevant community studies, plans, reports, and technical documents were reviewed in the inventory, evaluation, and planning phases of the 2025 Multi-Hazard Mitigation Plan Update's development. Emergency



Action Plans for each dam profiled were reviewed for areas of potential flooding and inundation in the event of a dam incident. Ordinances, such as the City’s floodplain ordinance, were also reviewed. These plans and regulations were used to identify areas of future growth and development, as well as to identify and evaluate hazardous areas and plan for appropriate mitigation measures.

Reviewing plans, documents, and literature as part of the planning process in the development of this plan was part of an effort to identify and describe past and possible future hazard occurrences that have affected, or may affect, the planning area. All resources, as well as how each has been incorporated into this plan, are detailed in Table 2-5 and Table 2-6.

2.5.1. Literature and Resources Reviewed

Information regarding hazards, disaster history, future patterns, and local capabilities that have been incorporated into this plan are listed in Table 2-5.

Table 2-5 Sources Used and Information Reviewed/Incorporated Into Plan

Agency/Document	Relevant Information Incorporated into Plan
National Oceanic and Atmospheric Administration (NOAA) - National Centers for Environmental Information (NCEI) Storm Events Database	Previous occurrences of drought, extreme heat, fire/wildfire, flood, hail, high wind, tornado, and severe winter storms/extreme cold in Chapter 3
Association of State Dam Safety Officials (ASDSO) Dam Incident Database	Previous occurrences of dam incidents in Chapter 3
NOAA National Integrated Drought Information System (NIDIS)	Previous occurrences of drought in Chapter 3
U.S. Geological Survey Earthquake Catalog	Previous occurrences of earthquakes in Chapter 3
National Interagency Fire Center Wildland Fire Incident Location Database	Previous occurrences of wildfire in Chapter 3
Vaisala Xweather 2024 Annual Lightning Report	Previous occurrences of lightning in Chapter 3
U.S. Coast Guard National Response Center Database	Previous occurrences of hazardous materials in Chapter 3
FEMA Disaster Declaration History for Payne County	Historical disaster declarations, impacts, and funding statistics
FEMA Floodplain, FIRM depth maps	Integrated into flood vulnerability assessment, in addition to other components of the HMP
U.S. Census Bureau	Community statistics and overview
Oklahoma Department of Environmental Quality (ODEQ)	Information integrated into Hazardous Materials section
Sperry-Piltz Ice Accumulation (SPIA) Index	Analysis of Severe Winter Storm extent
Storm Prediction Center (SPC)	Hazard graphics



Agency/Document	Relevant Information Incorporated into Plan
Websites and social media pages for the City of Stillwater	Used in the Capabilities Assessment of this Plan in conjunction with information from officials from each jurisdiction and organization to identify the existence and opportunities for each capability, as well as to track publicization of opportunities presented to the public for their involvement
Oklahoma Water Resources Board (OWRB)	Location of dams with impacts to the City, Hazard potential of these dams, Funding information as part of capabilities assessment
National Inventory of Dams	Location of dams with impacts to the City, Hazard potential of these dams
International Code Council (ICC)	Integration of information regarding current building practices to identify areas where future development could be enhanced, and where impacts of hazards could be mitigated
Oklahoma Uniform Building Code Commission	Reference for statewide ICC code adoption standards
U.S. Drought Monitor (USDM)	Used to determine and delineate drought categories, Historical time series of drought in the planning area
Enhanced Fujita (EF) Tornado Rating Scale	Analysis of Tornado hazard/extent
NWS Residential Tornado Damage Descriptions	Analysis of Tornado hazard/extent
Combined NOAA/TORRO Hail Intensity Scale (H Scale)	Analysis of Hail extent
Lightning Activity Level (LAL)	Analysis of Lightning extent
FEMA National Risk Index	Analysis of social vulnerability indices
Centers for Disease Control/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Social Vulnerability Index (SVI)	Analysis of social vulnerability indices
Oklahoma Climatological Survey (OCS) Fire Danger Model (OK-FIRE)	Analysis of Wildfire extent
Combined Fire Danger Rating & Burning Index (BI)	Analysis of Wildfire extent
Palmer Drought Severity Index (PDSI)	Analysis of Drought extent
U.S. Geological Survey (USGS)	Analysis of historical Earthquake events
Oklahoma Geological Survey (OGS)	Analysis of Expansive Soils in Oklahoma



Agency/Document	Relevant Information Incorporated into Plan
U.S. Department of Transportation (U.S. DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA)	Analysis of Hazardous Materials extent
Southern Climate Impacts Planning Program	Analysis of future conditions and projected changes in hazards

2.5.2. Plans Reviewed

Information from plans that have been incorporated into this plan update is listed in Table 2-6.

Table 2-6 Plans Reviewed and Incorporated Into this Hazard Mitigation Plan

Plan Title	Relevant Information Incorporated into Plan
2020 City of Stillwater Hazard Mitigation Plan Update	Overview of Planning Area and Participating Jurisdictions, Previous hazard risk assessments and vulnerabilities, Capability assessments and vulnerabilities, Mitigation Action Plan, and the strategy for its implementation, Community goals and previous mitigation strategies
2008 City of Stillwater Annexation Plan	Capability Assessment
2023 Boomer Creek Master Drainage Plan	Capability Assessment
2030 C3 Comprehensive Plan	Capability Assessment, Locations of Future Development Areas
2024 Stillwater Data Center Economic Development Project Plan	Capability Assessment
Stillwater Watershed Management Plan	Capability Assessment
2021 Stillwater Stormwater Management Program	Capability Assessment
Stillwater Transportation Enhancement Plan	Capability Assessment
2024 Standard Hazard Mitigation Plan for the Great State of Oklahoma	Hazard Risk Assessments
City of Stillwater Emergency Operations Plan	Risk assessment, Capability Assessment
Emergency Action Plans (EAPs) for: - Lake Carl Blackwell - Lake McMurtry (NRCS Site 40) - Cedar Isle - NRCS Sites 23, 24, 26, 28, 29, 30, 33C, 39, 46, 48, 49A, 49B	Communities, structures, and infrastructure that can be affected by inundation scenarios Expected floodwater arrival times (Dam incidents)



Chapter 3 HAZARD IDENTIFICATION AND RISK ASSESSMENT

Summary of Changes

- Changes in this chapter include:
- In addition to the hazards profiled in the 2020 plan, Expansive Soils was profiled as a new hazard in this update
 - A new section was developed to outline Repetitive Loss and Severe Repetitive Loss properties across the planning area

3.1. List of Identified Hazards

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Element B1-f. For participating jurisdictions in a multi-jurisdictional plan, does the plan describe any hazards that are unique to and/or vary from those affecting the overall planning area?

Stillwater considered a full range of hazards that may affect each jurisdiction for the 2025 HMP Update. This process included a review of the 2020 HMP, a review of the 2024 State of Oklahoma Hazard Mitigation Plan, a review of previous events and losses, as well as information on the frequency, magnitude and costs associated with hazards that have affected Stillwater or hold the potential to do so.

Table 3-1 Types of Hazards Profiled in This Plan

Hazard	How Identified	Why Identified
Tornado	Data from NCEI, input from Core Group, Stakeholders, and Public	The Planning Area is located within Tornado Alley, and faces a consistent, perennial threat of tornado occurrence
Flood	Data from NCEI, input from Core Group, Stakeholders, and Public	Numerous creeks crisscross the landscape across the City of Stillwater, which hold the potential to overtop their banks during heavy rainfall events. Urban flooding also occurs during these periods when stormwater drainage infrastructure becomes temporarily overwhelmed.
High Wind	Data from NCEI, input from Core Group, Stakeholders, and Public	Thunderstorms producing high wind are a common occurrence across the Planning Area. Additionally, strong low pressure systems can produce high winds outside of thunderstorms that can present a hazard.



Hazard	How Identified	Why Identified
Fire/Wildfire	Data from NCEI, input from Core Group, Stakeholders, and Public	A persistent threat of fire affects every municipality in the planning area. Urban fire and wildfire both present hazards each participating jurisdiction. Since the planning area includes undeveloped areas, wildfire risks are higher there.
Severe Winter Storms/Extreme Cold	Data from NCEI, input from Core Group, Stakeholders, and Public	Severe winter storms and extreme cold frequently occur in the planning area. This hazard can have wide-ranging effects and produce cascading risks affecting public health and safety.
Drought	Data from NCEI, input from Core Group, Stakeholders, and Public	Drought can have a variety of impacts on the planning area, including on the quantity and quality of water supply, risk level to wildfire, and co-occurrence with extreme heat/extreme cold and expansive soils
Extreme Heat	Data from NCEI, input from Core Group, Stakeholders, and Public	Extreme heat occurs on a regular basis each summer in the planning area, with excessive heat warnings issued by NWS Tulsa at least once per year. Extreme heat often co-occurs with wildfires, drought, and expansive soils.
Dam Incident	Data from ASDSO, input from Core Group, Stakeholders, and Public	This hazard is profiled in this plan due to the potential of effects from 3 high hazard dams with identified inundation areas within the planning area.
Hail	Data from NCEI, input from Core Group, Stakeholders, and Public	Hail and severe thunderstorms are a common occurrence in the planning area. The frequency of thunderstorms means that the risk of large, damaging hail is an inherent risk with nearly any thunderstorm that affects the Area.
Lightning	Data from NCEI and Vaisala, input from Core Group, Stakeholders, and Public	As with other thunderstorm-related hazards, the frequency of thunderstorms translates to an inherent risk of damaging cloud-to-ground lightning strikes that can affect the planning area.
Earthquake	Data from USGS, input from Core Group, Stakeholders, and Public	With the increase in seismic activity across parts of the State since 2009, it has become important to give consideration to earthquakes as a hazard that has the potential to produce damage and affect public health and safety across the planning area.



Hazard	How Identified	Why Identified
Expansive Soils	Data from OGS, input from Core Group, Stakeholders, and Public	Expansive soils is a hazard that can produce expensive damage to structures in the planning area.
Hazardous Materials	Data from USDOT-PHMSA and USCG NRC, input from Core Group	Several Tier II facilities and highly traveled roadways, on which hazardous materials may be transported, are located within the bounds of the planning area.

3.2. Declared Disaster History

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Of the 245 Federal disasters declared in the State of Oklahoma between 1953 and March 19, 2025, Payne County received 38, seven of those being fire management assistance declarations (FM). The table below outlines each FEMA declaration including Payne County. It should be noted that declarations prior to 1964 do not contain county data as it is not available (FEMA 2018).

Table 3-2 Federally Declared Disasters in Payne County, OK, (1953-2015)⁷

Disaster #	Declaration Date	Incident Period	Incident Type
DR-441-OK	June 10, 1974	June 10, 1974	Severe Storms, Flooding
DR-453-OK	November 26, 1974	November 26, 1974	Severe Storms, Flooding
DR-474-OK	July 9, 1975	July 9, 1975	Severe Storms, Flooding, Tornadoes
DR-662-OK	June 18, 1982	June 18, 1982	Severe Storms, Flooding
DR-704-OK	May 3, 1984	April 26 – April 29, 1984	Severe Storms, Tornadoes
DR-778-OK	October 14, 1986	September 26 – October 15, 1986	Severe Storms, Flooding
DR-866-OK	May 18, 1990	April 14, – June 1, 1990	Flooding, Severe Storms, Tornadoes
DR-991-OK	May 12, 1993	May 8 – May 26, 1993	Flooding, Severe Storms, Tornadoes
EM-3118-OK	February 27, 1996	February 27 – May 31, 1996	Fire
DR-1272-OK	May 4, 1999	May 3 – May 4, 1999	Tornadoes, Severe Storms, Flooding

⁷ Data for State and Federally-Declared Disasters in this table was sourced from FEMA at the following website:



Disaster #	Declaration Date	Incident Period	Incident Type
DR-1355-OK	January 5, 2001	December 25, 2000 – January 10, 2001	Severe Winter Storm
DR-1384-OK	June 29, 2001	May 27 – May 30, 2001	Severe Storms
DR-1401-OK	February 1, 2002	January 30 – February 11, 2002	Ice Storm
DR-1452-OK	February 4, 2003	December 3 – December 4, 2002	Severe Ice Storm
EM-3219-OK	September 5, 2005	August 29 – October 1, 2005	Hurricane Katrina Evacuation
DR-1623-OK	January 10, 2006	November 27, 2005 – March 31, 2006	Severe Wildfire Threat
FM-2623-OK	January 19, 2006	January 15, 2006	North Stillwater Fire
EM-3272-OK	January 14, 2007	January 12 - January 26, 2007	Severe Winter Storm, Flooding
DR-1712-OK	July 7, 2007	June 10 - July 25, 2007	Severe Storms, Flooding, Tornadoes
EM-3280-OK	December 10, 2007	December 8, 2007 – January 3, 2008	Severe Winter Storm
DR-1735-OK	December 18, 2007	December 8, 2007 – January 3, 2008	Severe Winter Storm
FM-2813-OK	April 10, 2009	April 13, 2009	Mulhall Fire
DR-1846-OK	June 19, 2009	April 9 – April 12, 2009	Wildfire
EM-3308-OK	January 30, 2010	January 28 – January 30, 2010	Severe Winter Storm
DR-1876-OK	February 25, 2010	December 24 – December 25, 2009	Severe Winter Storm
EM-3316-OK	February 2, 2011	January 31 – February 5, 2011	Severe Winter Storm
FM-5002-OK	August 4, 2012	August 4 – August 10, 2012	Glencoe Fire



Disaster #	Declaration Date	Incident Period	Incident Type
FM-5003-OK	August 4, 2012	August 4 – August 10, 2012	Drumright Fire
4438-DR-OK	June 1, 2019	May 7, 2019 – June 9, 2019	Severe Storms, Straight-line Winds, Tornadoes, Flooding
EM-3462-OK	March 13, 2020	January 20, 2020 – May 11, 2023	COVID-19
4530-DR-OK	April 5, 2020	January 20, 2020 – May 11, 2023	COVID-19
4575-DR-OK	December 21, 2020	October 26 – October 29, 2020	Severe Winter Storm
3555-EM-OK	February 27, 2021	February 8 – February 20, 2021	Severe Winter Storm
4587-DR-OK	February 24, 2021	February 8 – February 20, 2021	Severe Winter Storm
DR-4721-OK	July 19, 2023	June 14 – June 18, 2023	Severe Storms, Straight-line Winds, Tornadoes
FM-5543-OK	October 30, 2024	October 29, 2024	Euchee Creek Fire
FM-5558-OK	March 14, 2025	March 14, 2025	Stillwater Fire
FM-5566-OK	March 15, 2025	March 14, 2025	Underwood Fire

3.3. Hazard Probability Rating

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Probability describes the frequency that a hazard is likely to occur. Each hazard is assigned a likelihood rating based on the criteria and methods described below:

Probability was determined by calculation using this formula:

$$\frac{\text{Total Number of Events}}{\text{Total Number of Years}} = \text{Probability (\%)} \text{ of event occurring in a given year}$$



Based on the above calculation, probability is quantified as follows:

Table 3-3 Metrics Used to Classify Probabilities of Future Hazard Events

Probability Rating	Probability Percentage Interval Range	Statistical Frequency of Occurrence
Highly Likely	≥ 90%	Annually or more
Likely	11% - 89%	Every 1-10 years
Occasional	1% - 10%	Every 11-100 years
Unlikely	< 1%	Less than every 100 years

For instance, a given location with 70 tornadoes on record within a 51-year span would yield a calculation of $70 / 51 = 1.4$ tornadoes per year, on average. According to the metrics in Table 3-3, this would mean that tornadoes are assigned a rating of “Highly Likely” for this location.

3.4. Profiled Hazards

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Details of each natural hazard and its impacts on the planning area are provided in separate profiles for each hazard. Six hazards profiled in the previous plan are being profiled differently in this one. In 2020, the plan profiled “Severe Winter Storms” as a hazard. While it could be implied that this includes extreme cold, the uncertainty regarding whether the assumption needs to be made has been removed, and the hazard is being profiled as “Severe Winter Storms/Extreme Cold” in this plan. Next, “High Wind and Tornado” are two hazards which were profiled together in the 2020 plan due to the fact that both are wind-related hazards. Since high winds can develop outside of thunderstorms in Oklahoma, and since the damage resulting from tornadoes is distinct from that resulting from straight-line winds, these two hazards are being profiled independently from one another in this plan. In 2020, “Dam Failure” was profiled. As a matter of nuance, the wording of this hazard has been adjusted slightly to “Dam Incident” to capture the full range of hazards that can occur related to dams including, but not necessarily limited to, failure. “Fire”, as profiled in the 2020 plan, has been adjusted to “Fire/Wildfire” in this plan. While this is another hazard where the nuance in the wording of the hazard is adjusted to present a more holistic approach to how it is profiled in this plan, the wording in the 2025 plan clarifies the distinction that fire and wildfire are both hazards that are related to the risk associated with burning. “Hailstorm” is being profiled as “Hail” in this plan since it is a distinct hazard resulting from severe thunderstorms, aside from others such as lightning, high wind, and tornado. Finally, the 2020 plan did not profile “Expansive Soils” as a distinct hazard. Considering the importance of the holistic focus on ensuring all possible hazards are addressed, and since this hazard is distinct from drought, this hazard has been included in the list of hazards profiled for the 2025 update.



Table 3-4 Hazards Profiled in 2020 and 2025 HMPs

2020	2025
High Wind and Tornado	Dam Incident
Flood	Drought
Dam Failure	Earthquake
Fire	Extreme Heat
Lightning	Fire/Wildfire
Extreme Heat	Flood
Earthquake	Hail
Hailstorm	Lightning
Severe Winter Storms	High Wind
Hazardous Materials	Tornado
Drought	Severe Winter Storms/Extreme Cold
	Expansive Soils
	Hazardous Materials

3.4.1. Dam Incident

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

The Federal Emergency Management Agency (FEMA) defines a dam as “a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water.” Dams typically are constructed of earth, rock, concrete, or tailings (chaff) from mining operations. A dam failure is the collapse, breach, or other failure resulting in downstream flooding. A reservoir impounds an amount of water behind a dam that is measured in acre-feet. An acre-foot is the volume of water that covers an acre of land to a depth of one foot, or approximately 325,000 gallons. As a function of upstream topography, even a small dam may impound or detain many acre-feet or millions of gallons of water.

A break in a dam or levee produces an extremely dangerous flood situation because of the high velocities and large volumes of water released. In the event of a dam or levee failure, the potential energy of the water stored behind even a small dam or levee can cause great property damage, as well as loss of life if there are people downstream from the dam or behind the levee. This inundation’s extent may be minimal to uninhabited farmland or catastrophic in an urban environment.

Dams

Failure is the most dangerous type of hazard related to dams. Dams can fail by several different means. Three (3) general dam failure models are:



- Natural disaster-related failure – this occurs when a dam is overtopped by floodwaters which create a breach through the embankment.
- Intrinsic structural failure – this includes foundation problems, either under sunny-day circumstances or during high reservoir levels.
- Failure resulting from an act of terrorism or sabotage.

There can be varying levels of dam failure. Partial dam failures include inadequate spillway capacity that causes excess flow to overtop the dam, and internal erosion through the dam or foundation. Complete failure occurs if internal erosion or overtopping results in a total structural breach, releasing a high-velocity wall of debris-laden water rushing downstream, damaging or destroying everything in its path.

Flooding can occur downstream from a dam without the structure being breached. Sometimes, to prevent overtopping and catastrophic failure, dams are forced to make emergency releases of large amounts of water, which can cause downstream flooding.

Any dam in Oklahoma that has a height of 25 feet or more from the natural streambed and/or 50 acre-feet or more of storage capacity, is under the jurisdiction of the Oklahoma Water Resources Board (OWRB).

Hazard classifications used by the Oklahoma Water Resources Board (OWRB) to identify dams are based on their location and the population density located downstream from the structures. These hazard classifications are identified in Table 3-5.

Table 3-5 OWRB Dam Hazard Classifications

Hazard-Potential Classification	Risk Involved with Dam Failure	Inspection Frequency
High	Probable loss of human life	Annually, by a registered professional engineer
Significant	No probable loss of human life but can cause economic loss or disruption of lifeline facilities	Every 3 years by a registered professional engineer
Low	No probable loss of human life and low economic loss	Every 5 years

It must be noted that OWRB assigns classifications to dams based on function, location and potential for downstream damage, if breached. Classifications are not an indicator of structural integrity.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

A summary of dams that affect the City, with their respective classifications, are listed in Table 3-6, followed by Dam Overview tables for each structure.

In addition to dam incidents, other types of flood inundation risks are those associated with levee incidents/failures. **No levees catalogued in the National Levee Database are located in any areas that would have an impact on the planning area. Thus, no inundation threats from levees are expected in the City of Stillwater.**



Table 3-6 Dams that Produce Inundation in the City of Stillwater

OWRB Dams				
<i>ID</i>	<i>Name</i>	<i>County</i>	<i>OWRB Hazard Rating</i>	<i>Source</i>
OK11115	Cedar Isle	Payne	High	Stillwater Creek (Trib.)
OK01388	Lake Carl Blackwell	Payne	High	Stillwater Creek
NRCS Dams				
<i>ID</i>	<i>Name</i>	<i>County</i>	<i>OWRB Hazard Rating</i>	<i>Source</i>
OK01389	Boomer Lake (NRCS Site 23)	Payne	High	Boomer Creek
OK01396	Lakeside Golf Course (NRCS Site 24)	Payne	High	Boomer Creek (Trib.)
OK21526	Whittenberg Lake (NRCS Site 26)	Payne	High	Boomer Creek
OK01397	Hazen Lake (NRCS Site 28)	Payne	High	Boomer Creek (Trib.)
OK01398	SCS-Stillwater Creek (NRCS Site 29)	Payne	High	Boomer Creek (Trib.)
OK01399	SCS-Stillwater Creek (NRCS Site 30)	Payne	High	Stillwater Creek (Trib.)
OK30014	SCS Stillwater Creek (NRCS Site 33C)	Payne	High	Cimarron River (Trib.)
OK01428	SCS-Stillwater Creek (NRCS Site 39)	Noble	High	Dry Creek
OK01429	Lake McMurtry (NRCS Site 40)	Noble	High	North Stillwater Creek
OK01400	Ham's Lake (NRCS Site 46)	Payne	High	Harrington Creek
OK01401	SCS-Stillwater Creek (NRCS Site 48)	Payne	High	Stillwater Creek (Trib.)
OK22280	SCS-Stillwater Creek (NRCS Site 49A)	Payne	High	Stillwater Creek (Trib.)
OK22262	SCS-Stillwater Creek (NRCS Site 49B)	Payne	High	Stillwater Creek (Trib.)



Dam Overviews

Cedar Isle Dam	
NID ID Number	OK11115
Location	Payne County (Lat. 36.092253, Lon. -97.10623299999999)
Source	Tributary to Stillwater Creek
Owner / Operator	Sangre Ridge Homeowners Corp.
Year Completed	1950
Length / Height	425 feet / 19 feet
Surface Area	19 Acres
Construction Material	Earth
Use of Dam	Flood risk reduction
Capacity	35 Acre-feet (normal) / 99 Acre-feet (maximum)
EAP	Yes, 2016

Lake Carl Blackwell Dam	
NID ID Number	OK01388
Location	Payne County (Lat. 36.130145999999996, Lon. -97.191828)
Source	Stillwater Creek
Owner / Operator	Oklahoma State University
Year Completed	1937
Length / Height	4,300 feet / 72 feet
Surface Area	3.370 Acres
Construction Material	Earth
Use of Dam	Water Supply
Capacity	61,500 Acre-feet (normal) / 119,040 Acre-feet (maximum)
EAP	Yes, 2022



Boomer Lake Dam (NRCS Site 23)

NID ID Number	OK01389
Location	Payne County (Lat. 36.14363, Lon. -97.06658999999999)
Source	Boomer Creek
Owner / Operator	Payne County Conservation District
Year Completed	1932
Length / Height	3,300 feet / 45 feet
Surface Area	275 Acres
Construction Material	Earth
Use of Dam	Water Supply
Capacity	2,544 Acre-feet (normal) / 119,040 Acre-feet (maximum)
EAP	Yes

Lakeside Golf Course (NRCS Site 24)

NID ID Number	OK01396
Location	Payne County (Lat. 36.178869999999996, Lon. -97.06406799999999)
Source	Tributary to Boomer Creek
Owner / Operator	Payne County Conservation District
Year Completed	1967
Length / Height	1,400 feet / 32 feet
Surface Area	10 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	39 Acre-feet (normal) / 980 Acre-feet (maximum)
EAP	Yes



Whittenberg Lake (NRCS Site 26)	
NID ID Number	OK21526
Location	Payne County (Lat. 36.179532, Lon. -97.07146)
Source	Boomer Creek
Owner / Operator	Payne County Conservation District
Year Completed	1981
Length / Height	2,000 feet / 28 feet
Surface Area	24 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	108 Acre-feet (normal) / 2,181 Acre-feet (maximum)
EAP	Yes

Hazen Lake (NRCS Site 28)	
NID ID Number	OK01397
Location	Payne County (Lat. 36.150926999999996, Lon. -97.075401)
Source	Tributary to Boomer Creek
Owner / Operator	Payne County Conservation District
Year Completed	1964
Length / Height	1,090 feet / 25 feet
Surface Area	8 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	25 Acre-feet (normal) / 542 Acre-feet (maximum)
EAP	Yes



SCS-Stillwater Creek (NRCS Site 29)	
NID ID Number	OK01398
Location	Payne County (Lat. 36.147166999999996, Lon. -97.079095)
Source	Tributary to Boomer Creek
Owner / Operator	Payne County Conservation District
Year Completed	1967
Length / Height	620 feet / 27 feet
Surface Area	3 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	70 Acre-feet (normal) / 144 Acre-feet (maximum)
EAP	Yes

SCS-Stillwater Creek (NRCS Site 30)	
NID ID Number	OK01399
Location	Payne County (Lat. 36.126326999999996, Lon. -97.086619)
Source	Tributary to Stillwater Creek
Owner / Operator	Payne County Conservation District
Year Completed	1965
Length / Height	1,343 feet / 30 feet
Surface Area	7 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	23 Acre-feet (normal) / 440 Acre-feet (maximum)
EAP	Yes



SCS-Stillwater Creek (NRCS Site 33C)	
NID ID Number	OK30014
Location	Payne County (Lat. 36.163036999999996, Lon. -97.102246999999999)
Source	Tributary to Cimarron River
Owner / Operator	Payne County Conservation District
Year Completed	2005
Length / Height	1,000 feet / 23 feet
Surface Area	54 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	49 Acre-feet (normal) / 422 Acre-feet (maximum)
EAP	Yes

SCS-Stillwater Creek (NRCS Site 39)	
NID ID Number	OK01428
Location	Noble County (Lat. 36.192474, Lon. -97.157175999999999)
Source	Dry Creek
Owner / Operator	Noble County Conservation District
Year Completed	1966
Length / Height	1,300 feet / 42 feet
Surface Area	21 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	144 Acre-feet (normal) / 1,251 Acre-feet (maximum)
EAP	Yes



Lake McMurtry (NRCS Site 40)

NID ID Number	OK01429
Location	Noble County (Lat. 36.163481, Lon. -97.179052)
Source	North Stillwater Creek
Owner / Operator	Noble County Conservation District
Year Completed	1971
Length / Height	3,039 feet / 64 feet
Surface Area	1,155 Acres
Construction Material	Earth
Use of Dam	Water Supply
Capacity	19,733 Acre-feet (normal) / 24,726 Acre-feet (maximum)
EAP	Yes

Ham's Lake (NRCS Site 46)

NID ID Number	OK01400
Location	Payne County (Lat. 36.107668, Lon. -97.182442)
Source	Harrington Creek
Owner / Operator	Payne County Conservation District
Year Completed	1965
Length / Height	1,900 feet / 57 feet
Surface Area	43 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	346 Acre-feet (normal) / 3,522 Acre-feet (maximum)
EAP	Yes



SCS-Stillwater Creek (NRCS Site 48)	
NID ID Number	OK01401
Location	Payne County (Lat. 36.112162, Lon. -97.14402299999999)
Source	Tributary to Stillwater Creek
Owner / Operator	Payne County Conservation District
Year Completed	1965
Length / Height	700 feet / 22 feet
Surface Area	4 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	70 Acre-feet (normal) / 134 Acre-feet (maximum)
EAP	Yes

SCS-Stillwater Creek (NRCS Site 49A)	
NID ID Number	OK22280
Location	Payne County (Lat. 36.091555, Lon. -97.116089)
Source	Tributary to Stillwater Creek
Owner / Operator	Payne County Conservation District
Year Completed	1998
Length / Height	1,250 feet / 32 feet
Surface Area	55 Acres
Construction Material	Earth
Use of Dam	Flood Risk Reduction
Capacity	146 Acre-feet (normal) / 604 Acre-feet (maximum)
EAP	Yes



SCS-Stillwater Creek (NRC Site 49B)	
NID ID Number	OK022262
Location	Payne County (Lat. 36.093787, Lon. -97.12981699999999)
Source	Tributary to Stillwater Creek
Owner / Operator	Payne County Conservation District
Year Completed	1997
Length / Height	1,300 feet / 30 feet
Surface Area	181 Acres
Construction Material	Earth
Use of Dam	Water Supply
Capacity	81 Acre-feet (normal) / 3,175 Acre-feet (maximum)
EAP	Yes

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

Extent of dam incidents in the planning area for this plan is assessed through an examination of the storage capacity of the reservoir behind it, because this volume of water determines the range of flood inundation levels for both Sunny Day and PMF breach scenarios. Appendix D contains inundation maps, at-risk structures, and more. It also breaks down which jurisdictions are impacted by incidents at each dam based on inundation maps in each one's EAP and by those provided online at the [USACE Inventory of Dams website](#). In addition, depth of flooding is noted where that information has been made available.

Locations in the planning area downstream of each dam are those that would be exposed to the risks associated with a dam or levee incident. Inundation maps in each dam's EAP, which have been included in Appendix D, identify specific areas and depict the extent of inundation in each.

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

No record of a dam incident occurring affecting any interests within the planning area between January 1, 2015, and March 31, 2025 exists in the ASDSO database.

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and the lack of previous occurrences, the probability of a dam incident impacting the planning area is rated as **Unlikely**, especially considering the federal government's mandate to upgrade or decommission high-hazard dams.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the sub header titled "Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns."



Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-7 Vulnerabilities and Impacts to Dam Incidents in the City of Stillwater

Vulnerability	Impact
Many residents in Stillwater, both indoors and out, rely on warning sirens as their primary source for receiving warning information.	Relying on being able to hear warning sirens when indoors poses a risk to residents who are unable to hear them, particularly during a nocturnal hazard occurrence. Establishing an education/awareness program to inform residents on the purpose of outdoor warning sirens and the options available for them to receive warning information is an opportunity that can resolve this issue and can equip residents with life-saving knowledge.
City residents who live in dam inundation areas below High Hazard Potential Dams are generally unaware of the risk posed to them in the event of a dam incident.	Since flood arrival times and depths are lacking in some of these dams' EAPs (namely, NRCS sites 24, 26, 28, 29, and 30), the ability to notify residents in these areas, and that of emergency management officials to activate sirens and the suite of warning notifications, also becomes hampered.
Sangre Ridge Elementary and Stillwater Middle School hold the potential to be impacted by a dam incident at Cedar Isle Dam .	Risks to the lives and well-being of students and staff in these schools, with additional risk to the public who may attend events hosted by the District at either or both facilities, exist if a dam incident were to impact either or both campuses when people are present.
An incident at Lake Carl Blackwell Dam would produce inundation along the Stillwater Creek basin and would inundate large portions of the City of Stillwater.	Risks to lives and structures would result in a large swath of southern and central portions of the City, and up Boomer Creek along U.S. 177.
Boomer Creek's floodplain, on which Boomer Lake Dam (NRCS Site 23) sits, would carry floodwaters downstream which would inundate a wide swath across the central and southeastern portions of Stillwater in the event of an incident at this site.	Interests in these areas would experience impacts. Points of interest and of note included Stillwater High School, several apartment complexes, Stillwater Housing Authority, the City of Stillwater Senior Citizen Center (on East 12 th Ave), as well as numerous residences and businesses near Boomer Creek.
An incident at Stillwater Creek NRCS Site 33C would see a failure wave be carried down Cow Creek along and just outside the western edge of the City of Stillwater.	Several homes along and near Cow Creek on and north of Rutledge Drive would experience effects from an event in this scenario.



Vulnerability	Impact
An incident at Stillwater Creek NRCS Site 39 would produce inundation along and near Dry Creek south of the dam and into Stillwater Creek along and near it, extending into far western portions of Stillwater.	Homes along and near Dry Creek and Stillwater Creek in these areas would be at risk of inundation and effects from an event in this scenario.
An incident at Lake McMurtry Dam would produce an inundation wave that would flow down the Stillwater Creek basin, which would push into and inundate areas in Stillwater along and near it.	Similar to the effects described previously for Lake Carl Blackwell, an incident at Lake McMurtry Dam would produce risks to lives and structures in a large swath across southern and central portions of the City.
An incident at Stillwater Creek NRCS Site 46 (Ham's Lake Dam) would produce an inundation wave that would flow down the Stillwater Creek basin, which would push into and inundate areas in Stillwater along and near it.	Similar to the effects described previously for Lake Carl Blackwell and Lake McMurtry Dam, an incident at Ham's Lake Dam would produce risks to lives and structures in a large swath across southern and central portions of the City.
An incident at Stillwater Creek NRCS Site 48 would produce inundation that would affect 2 houses, an RV park, and a restaurant along 6 th Street (OK-51), west of Range Road.	Given that the houses are about 500 feet from the dam, the RV park is just over 700 feet, and the restaurant is approximately 0.25 mile away, a failure wave would inundate these areas very quickly with very little to no warning. Such a scenario would put these properties and any individuals in these areas at risk to their lives.
An incident at Stillwater Creek NRCS Sites 49A and/or 49B would produce inundation that would affect a large number of houses, several businesses, and City of Stillwater Fire Station #4 in the western portion of Stillwater prior to reaching the Stillwater Creek basin, then would proceed to produce inundation in areas similar to those inundated by an event at Ham's Lake Dam (Stillwater Creek NRCS Site 46), Lake McMurtry, and Lake Carl Blackwell.	In addition to the number of houses which would experience inundation effects from such an incident at this dam, firefighters stationed at Fire Station #4 would be cut off from responding and providing assistance during this event, resulting in the loss of a service which falls under a FEMA Community Lifeline and would have a significant detrimental impact on the community.

City of Stillwater officials state that all High Hazard Potential Dams profiled in this plan, those that produce potential inundation effects in the City, are inspected annually at a minimum. During and after heavy rain events, each one will be inspected, with inspection activities including assessment of conditions both upstream and downstream of the site. If any issues or concerns are discovered during these inspections, Stillwater Emergency Management is contacted directly.

Widespread flooding across much of north central and northeastern Oklahoma which occurred in May 2019 provided a significant test to the ability of these dams to maintain their integrity, and officials have reported that no issues were experienced during this event.



Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Increases in extreme rainfall (Easterling et al. 2017) may increase the likelihood of dam failure, however, this is highly dependent upon the quality of the structures. Most dams are at or near their 50-year design life, so the probability of failures increases with time. Dams that are not well maintained have an increased likelihood of failure. Washed out spillways, deteriorated primary spillway conduits, collapsed riser structures, and slope instability can lead to a dam breach. New development downstream of existing dams increases the potential consequences that would occur if a dam were to fail. Major dam failures across Oklahoma are few since owners are required to perform routine inspections and maintenance (OWRB 2019).

Land Use Development

2024 building footprint data was used to identify the number of existing structures located in the inundation area of High Hazard Potential Dams with inundation effects in Stillwater. A summary of these structures grouped by type is included in Table 3-8.

Table 3-8 Estimated Structure Count in Stillwater in the Event of Dam Inundation

Dam	Structure Type				
	Residential	Commercial	Other	Unclassified/Null	Total
Lake Carl Blackwell	2,482	418	85	90	3,435
Boomer Lake (NRCS Site 23)	365	80	23	16	484
Whittenberg Lake (NRCS Site 26)	62	27	6	4	99
Hazen Lake (NRCS Site 28)	337	78	18	18	451
SCS-Stillwater Creek (NRCS Site 29)	337	78	18	18	451
SCS-Stillwater Creek (NRCS Site 30)	273	9	2	1	285
SCS-Stillwater Creek (Site 33C)	--	--	--	--	--
SCS-Stillwater Creek (NRCS Site 39)	--	--	--	--	--
Lake McMurtry (NRCS Site 40)	524	127	27	15	693



Dam	Structure Type				
	Residential	Commercial	Other	Unclassified/Null	Total
Ham's Lake (NRCS Site 46)	25	6	14	5	50
SCS-Stillwater Creek (NRCS Site 48)	--	--	--	--	--
SCS-Stillwater Creek (NRCS Site 49A)	55	6	1	1	63
SCS-Stillwater Creek (Site 49B)	73	8	1	5	87

Future development located within known inundation areas will be at risk during an event. Due to the potential forcefulness of rushing inundation waters, extensive damage, and likely destruction may be possible to any structures in such areas.

Population Patterns

As Stillwater's population continues to grow, care must be taken to avoid development not only in floodplains, but also in other areas identified as dam inundation areas.

As mentioned in Table 3-7, residents within the City are generally unaware of the risk posed to them by inundation resulting from an incident at one of the High Hazard Potential Dams that produce inundation effects where they live. Establishing an education/awareness program, including developing and making available an online tool for residents to find information on their home's risk to dam inundation can better prepare residents to protect themselves from such an occurrence. Additionally, and particularly beneficial for new residents to Stillwater, is establishing a partnership with local real estate agents to disclose dam inundation information when new individuals and families move to the City.

3.4.2. Drought

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

As defined by the American Meteorological Society⁸, drought is a period of abnormally dry weather sufficiently long enough to cause a serious hydrological imbalance. Drought is a relative term, therefore any discussion in terms of precipitation deficit must refer to the precipitation-related activity that is under discussion. For example, there may be a shortage of precipitation during the growing season resulting in crop damage (agricultural drought), or during the winter runoff and percolation season affecting water supplies (hydrological drought).

⁸ <https://glossary.ametsoc.org/wiki/Drought>



If drought conditions persist over many years, direct and indirect economic impacts can be significant. High temperatures, high winds, and low humidity can worsen drought conditions and make areas more susceptible to wildfire. In addition, human actions and demands for water resources can exacerbate drought-related impacts.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Since drought usually affects areas on a scale larger than that of Stillwater, the location of this hazard is considered uniform across the planning area.

Drought affects rural and undeveloped areas as well as urbanized areas. Effects on undeveloped areas are widely known to affect agricultural interests but can also affect wildlife and vegetative species in these areas.

Specific impacts on developed areas can include:

- Increased fire hazard
- Reduced water supplies for municipal/industrial, agricultural and power uses
- Damage to fish and wildlife habitat
- Increased consumer prices for food
- Reduced tourism and recreational activities
- Unemployment
- Reduced tax revenues because of reduced expenditures
- Foreclosed bank loans to businesses and surrounding farmers.

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

A drought's extent is calculated by considering its duration as well as its severity. While the 2020 Plan utilized the Palmer Drought Severity Index (PDSI) to examine extent, this Index is primarily used in practice as a soil moisture index. Application of the PDSI is better suited for near-term drought forecasts and outlooks. As such, the index provided by the U.S. Drought Monitor (USDM) will be used for this plan to measure extent. Not only does the USDM Index serve as a comprehensive national database for drought hazards, but it also provides historically observed impacts that are state-specific. Using the USDM "Drought Classification" chart in addition to the "State Impacts" description, Table 3-9 describes how categorical drought indices correlate with known impacts in Oklahoma from previously observed droughts.

Based on the USDM Drought Index, drought conditions can range from D0 to D4 in the City of Stillwater. This value is adjusted weekly through the Climate Prediction Center in response to current drought conditions.

Table 3-9 USDM Index and Historical Drought Impacts Observed in Oklahoma

Category	Description	Historically Observed Impacts in OK
D0	Abnormally Dry	• Crops are stressed (wheat, canola, alfalfa, pecans); winter wheat germination is delayed. • Stock pond levels decline
D1	Moderate Drought	• Summer crop and forage yields are reduced. • Wildfire risk increases. • Lake recreation activities are affected; deer reproduction is poor



Category	Description	Historically Observed Impacts in OK
D2	Severe Drought	• Dryland crops are severely reduced; pasture growth is stunted. • Cattle are stressed. • Burn bans begin. • Trees show significant wilting. • Spring-fed ponds are slow to refill
D3	Extreme Drought	• Grasses are dominant and hay is nonexistent; planting is delayed; fields are spotty; emergency CRP grazing is authorized. • Cattle have little water and feed. • Wildfires are increasing in number and severity. • Fishing is down; boating is hazardous with low lake levels; game bird populations decline. • Air quality is poor, with dust storms and smoke. • Lakes are critically low; producers are hauling water for cattle; wells are drying
D4	Exceptional Drought	• Ground is cracking; farmers are bailing failed crops or abandoning fields; pastures are bare; land is abandoned. • Cost of hay and water is high, and supplies are scarce; producers are liquidating herds. • Burn restrictions increase. • Fire season is long; rural fire departments are running out of finances. • Ranchers/farmers are desperate & experience huge economic loss. • Water lines are breaking; reservoir levels are nearing intake; mandatory water restrictions are implemented; water quality is poor

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Drought is a normal part of virtually all climates. However, an ample water supply is critical to the economic well-being of the United States and of Oklahoma. During droughts, crops do not mature, wildlife and livestock are undernourished, land values decrease, and unemployment increases.

In addition to NOAA NCEI records of drought, the U.S. Drought Monitor, which updates drought conditions across the U.S. on a weekly basis, also maintains records of drought conditions going back to the year 2000. **County-level granularity represents the finest level available for both databases and shows notable occurrences of drought affecting 100% of Payne County between January 1, 2015, and March 31, 2025.**

Information from both resources are depicted in Figure 3-1 and Table 3-10 below, which show six (6) occurrences of Severe drought conditions (D2) or greater during this timeframe in Payne County. Any specific impacts on the City of Stillwater is noted in each narrative according to the availability of that information. It should be noted that monetary damage estimates resulting from these drought events were not available in the NCEI database.

2025 City of Stillwater Multi-Hazard Mitigation Plan Update



Figure 3-1 Historical Drought Conditions in Payne County (2015-2025)

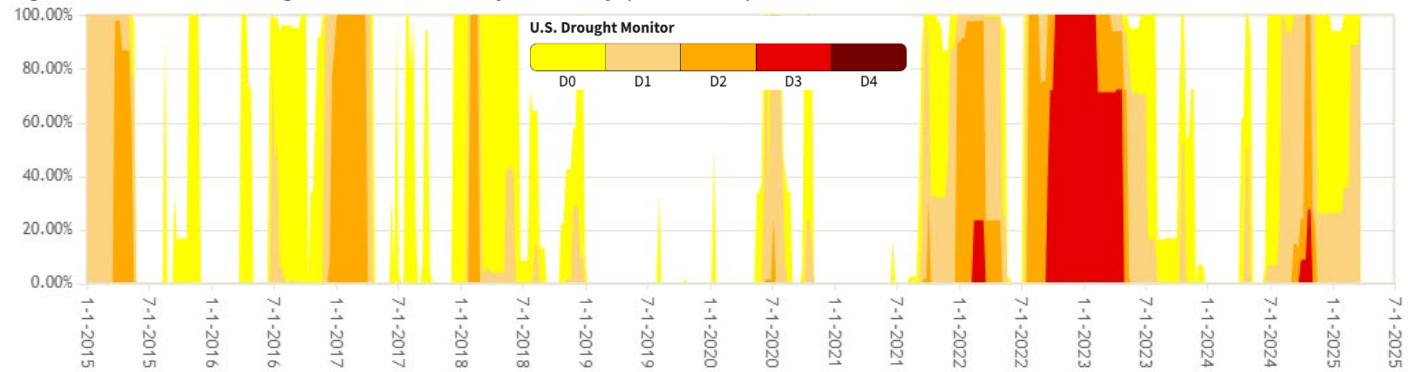


Table 3-10 Noteworthy Drought Impacts in Payne County, 2015 to 2024 (NCEI)

Date	Narrative
April to May 2015	Payne County entered 2015 experiencing D1 drought conditions. Persistent dry conditions continued into April and May, when D2 conditions developed. Record rainfall which occurred throughout the month of May eradicated drought conditions across the County by the end of the month.
December 2016 to April 2017	After an unseasonably dry summer and fall, D2 drought conditions set in across Payne County in December 2016. Persistently dry conditions allowed for the continuation of D2 drought for 5 months, through April 2017, when abundant rainfall across Payne County allowed for the elimination of severe drought.
January to February 2018	A lack of rainfall in Payne County allowed D2 drought conditions to develop in January 2018 and persist throughout the month of February when, by the last week of the month, rainfall brought relief to the County and allowed for removal of severe drought.
December 2021 to May 2022	Drier than normal conditions during the autumn months in 2021 grew to allow the development of severe drought conditions in Payne County in mid-December. Continued dry weather caused D3 conditions to set in between January 2022 and March. A few rainfall events in March allowed for some marginal improvement back to D2 drought conditions before another dry period that extended into May caused these conditions to persist. In May, rainfall allowed for the removal of drought conditions in Payne County.
July 2022 to May 2023	After rainfall in May and early June 2022 provided relief from the previous drought, high pressure set in, producing unseasonably hot conditions across Payne County. These above normal temperatures allowed for efficient evapotranspiration of surface moisture and D2 drought conditions set in by the beginning of July. Above normal temperatures persisted throughout much of July and into the first half of August, which aided in the worsening of drought conditions in Payne County into D3 territory. An extended period of below normal rainfall allowed D3 conditions to persist for several months, continuing well into 2023. Intermittent rains in April gave way to multiple rounds of heavy rainfall in May, which allowed for a significant easing of drought conditions into D1 territory, with gradual improvement continuing throughout the remainder of the year, with removal occurring at the end of 2023.
October to November 2024	A dry summer continued into the autumn months in Payne County, which facilitated the development of D2 drought conditions in October and November. Widespread, persistent rainfall in November allowed for improvement into D1 territory, which has continued through the period of the development of this plan.



Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and the occurrence of six (6) drought events over the past 10 years that have affected the planning area, the probability of this hazard is rated as **Likely**.

More details on the factors considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-11 Vulnerabilities and Impacts to Drought in the City of Stillwater

Vulnerability	Impact
Public water service to the City is provided by a single source.	Water shortages in the event of severe drought may preclude safe and reliable water availability to residents in the City of Stillwater . Risks associated with such an occurrence may be exacerbated for vulnerable populations for whom public water service is a necessity for health and life-sustaining needs.
Soil pulling away from structural foundations may result in damage to buildings situated on them.	Drought and expansive soils often go hand-in-hand, and pose an existential threat in Oklahoma. Should such an occurrence affect an impoverished resident in the City of Stillwater , the costs to repair a compromised foundation and/or damage to the integrity of their home may be too insurmountable for them. Damage to the integrity of structures as a result of such an occurrence may also go unnoticed, or the owners/occupants of such structures may lack awareness of the signs of such damage. In this case, occupants of these buildings are at risk of the structure failing, which pose a risk to their health and their lives.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Drought has always been part of Oklahoma’s climate because of highly variable precipitation patterns. However, droughts are projected to increase in severity and frequency in the future (Frankson et al. 2022). Even if annual precipitation amounts do not change much, higher temperatures will increase evaporation from lakes, soils, and plants, stressing agricultural and natural systems. Models project that Oklahoma will experience a decrease in soil moisture across all seasons by the end of the century, with the greatest decrease in the summer (Wehner



et al. 2017). Further, rising temperatures will lead to increased demand for water and energy, which could stress natural resources (Shafer et al. 2014). Read more about future drought in Climate Change Science and Projection Resources.

Land Use Development

Existing and future development are at risk of soils pulling away from foundations during periods of extreme drought, causing them to shift and resulting in damage to the integrity of structures. Additionally, paved roads and other concrete surfaces around the City are similarly at risk of damage as a result of shifting and subsiding soils due to drought.

Population Patterns

Significant growth in Stillwater's population may lead to a situation where public water supply exceeds demand if water shortages resulting from drought occur. Such an occurrence would affect all City residents and would have the largest impact on segments of the population who rely on water service being continuously available for health and medical needs.

3.4.3. Earthquake

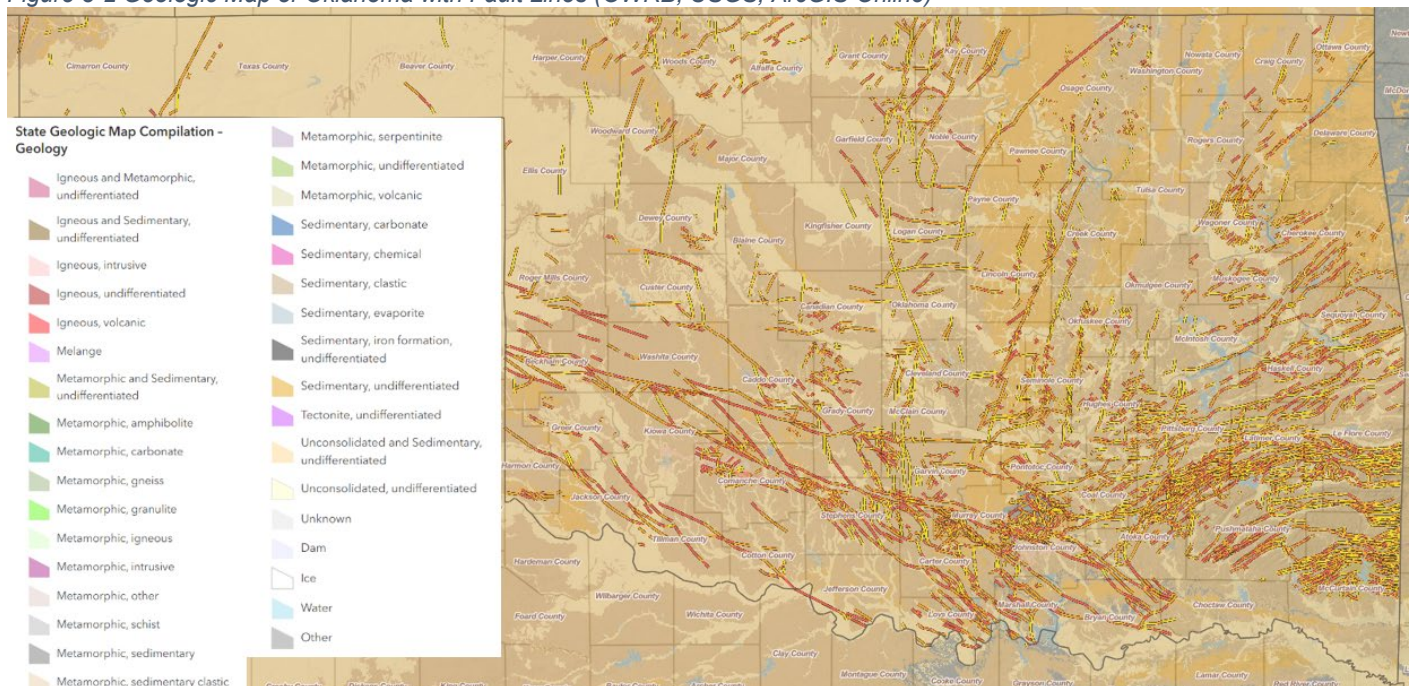
Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

An earthquake is a sudden release of energy that creates a movement in the earth's crust. Most earthquakes occur as the result of slowly accumulating pressure that causes the ground to slip abruptly along a geological fault or fracture line on or near a plate boundary. Waves of vibration which result within the earth create ground motion at the surface that causes the perception of shaking in a complex manner.

A geologic map of the state of Oklahoma with fault lines overlaid is shown in Figure 3-2.

Figure 3-2 Geologic Map of Oklahoma with Fault Lines (OWRB, USGS, ArcGIS Online)





Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Given an earthquake's possible geographic reach and the fact that a shaking event with an epicenter in a state or other area a considerable distance away from the planning area, **the risk of this hazard is considered uniform across the planning area.**

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

Two standard measures are used to classify an earthquakes' extent: magnitude and intensity. Magnitude is expressed as an Arabic number representing the total amount of energy released by the earthquake source based on the amplitude of the earthquake waves recorded on seismographs that share a common calibration. Moment magnitude (Mw), which "provides an estimate of earthquake size that is valid over the complete range of magnitudes, a characteristic that was lacking in other magnitude scales"⁹ is the metric that will be used in this plan to assess the expected magnitude of earthquake energy possible in Stillwater.

Intensity is expressed as a Roman numeral and is based on the observed effects of an earthquake on people, buildings, and natural features. Variations in this metric are common across a given geographic area and depend upon the location of the observer with respect to the earthquake's epicenter. In general, intensity decreases with distance from the source of the shaking. This scale is characterized by the U.S. Geological Survey (USGS) as one composed of increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, designated by Roman numerals. It does not have a mathematical basis, but instead is an arbitrary ranking based on observed effects.¹⁰ Other factors, such as rupture direction and soil type, also influence the amount of shaking and damage caused by an earthquake. In this plan, the Modified Mercalli Intensity (MMI) scale is the metric used to assess the expected intensity of ground shaking possible in Stillwater.

Combined, these two metrics will be used in this plan to portray a comprehensive assessment of the planning area's risk to earthquake, and the subsequent effects from this hazard.

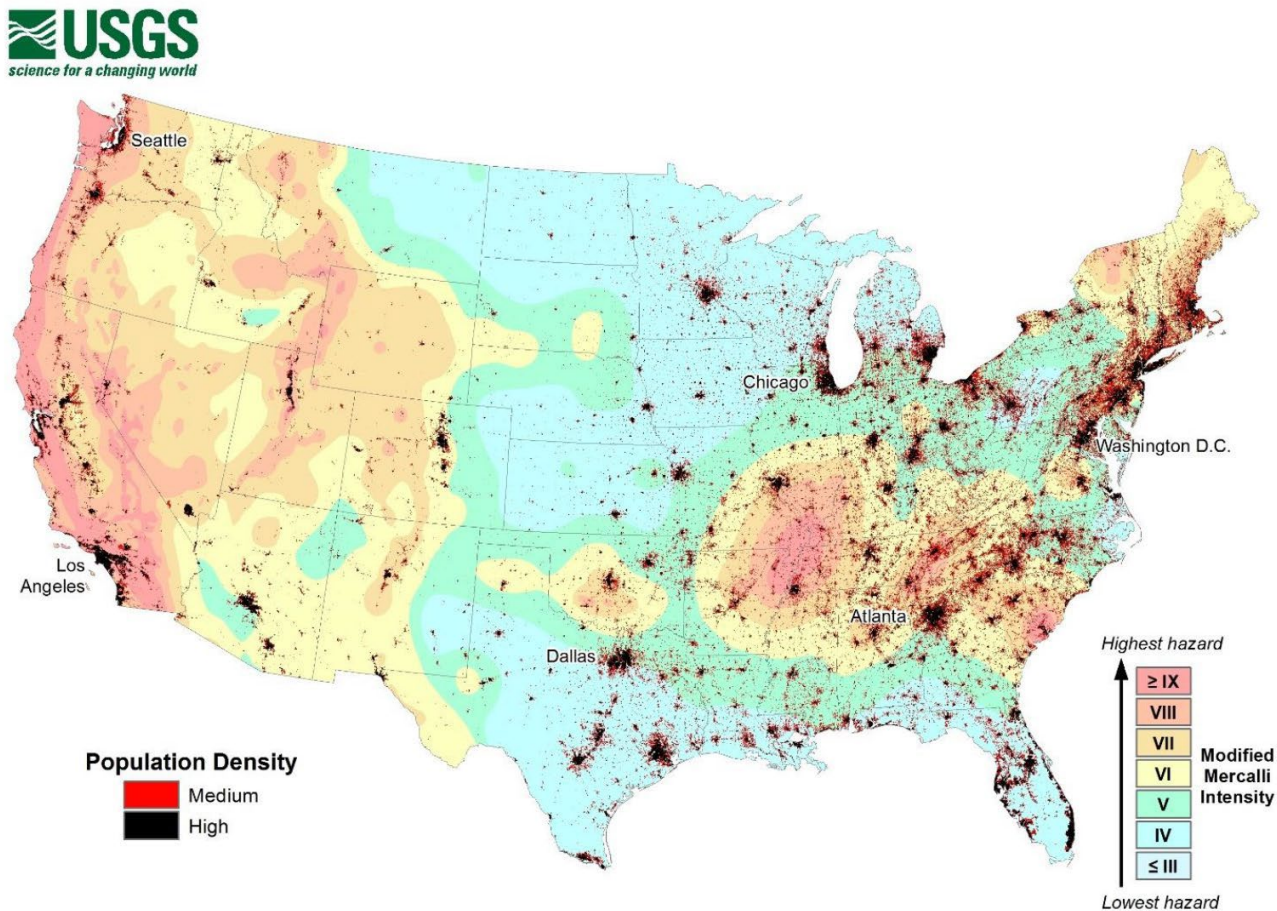
As depicted in Figure 3-3, USGS indicates that the planning area can expect to experience an earthquake ranging from imperceptible movement to strong shaking, or those with intensities between I and VI on the Modified Mercalli Intensity scale.

⁹ <https://www.usgs.gov/faqs/moment-magnitude-richter-scale-what-are-different-magnitude-scales-and-why-are-there-so-many#:~:text=The%20moment%20magnitude%20provides%20an,lacking%20in%20other%20magnitude%20scales.>

¹⁰ <https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale>



Figure 3-3 Population Exposed to Potentially Damaging Earthquake Ground Shaking (USGS)



USGS map showing (1) the locations of major populations and (2) the intensity of potential earthquake ground shaking that has a 2% chance of occurring in 50 years



Table 3-12 Earthquake Intensities, Classifications, and Potential Damages (USGS)

Intensity (MMI)	Potential Damages	Class (Mw)	Magnitude (Mw)	Description
I	none	Micro	1.0 – 1.9	Not felt except by a very few under especially favorable conditions.
II	none	Minor	2.0 – 2.9	Felt only by a few persons at rest, especially on upper floors of buildings.
III	none	Minor	3.0 – 3.9	Felt quite noticeably by people indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations are like the passing of a truck. Duration estimated.
IV	Light	Light	4.0 – 4.9	Felt indoors by any, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like a heavy truck striking building. Standing motor cars rocked noticeably.
V	Light	Moderate	5.0 – 5.9	Felt by nearly everyone; many awakened. Some dishes and windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Light	Strong	6.0 – 6.9	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster.
VII	Moderate	Major	7.0 – 7.9	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Moderate/ Heavy	Great	8.0 +	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage is great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Heavy			Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Heavy damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Very Heavy			Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Previous Occurrences

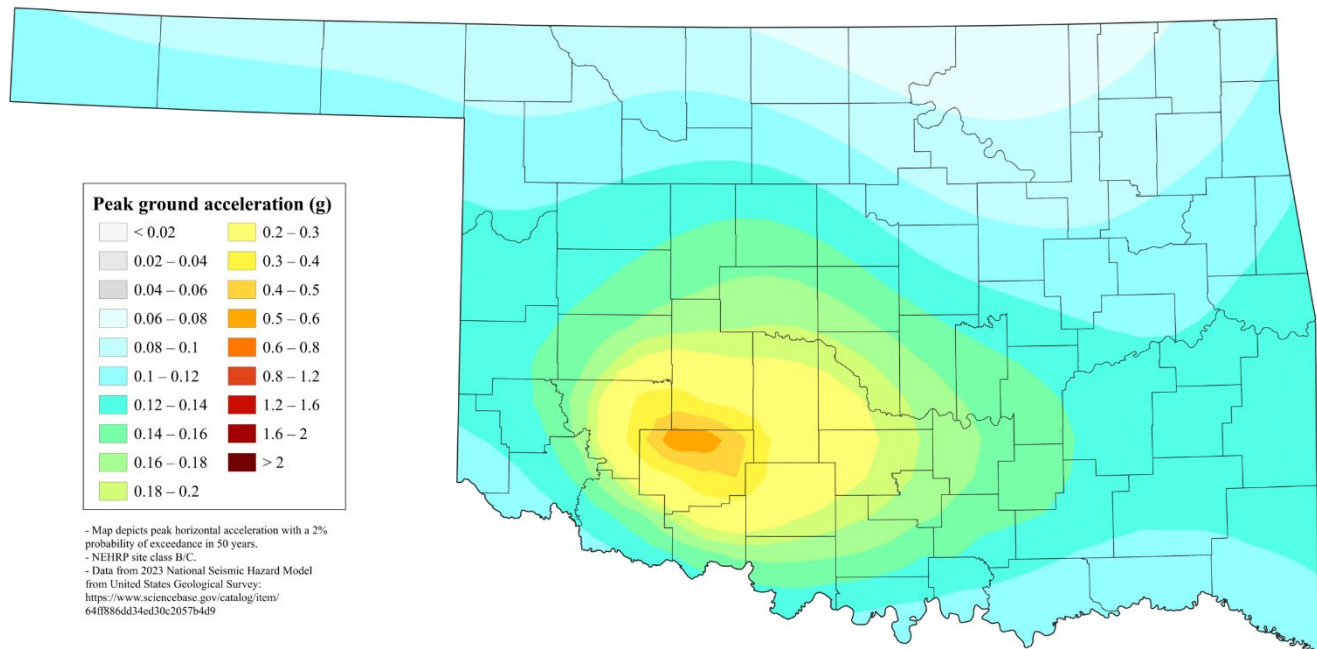
Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Historically, an average of 50 measurable earthquakes occur each year in Oklahoma although most of these are not strong enough to be felt. The earliest documented earthquake in what is now Oklahoma occurred on October 22, 1882, near Fort Gibson, Indian Territory. The Cherokee Advocate reported that “the trembling and vibrating were so severe as to cause doors and window shutters to open and shut, hogs to squeal, poultry to run and hide, and cattle to low.”

Beginning in 2009 however, seismic activity began to increase in Oklahoma. According to the Oklahoma Geological Survey (OGS) 1047 earthquakes located in Oklahoma in 2010 were recorded, 103 of which were reported as being “felt”. Oklahoma’s period of heightened seismic activity between 2009 and May 2014 includes 20 earthquakes with a magnitude of 4.0 to 4.8.

As shown in Figure 3-4, the peak ground acceleration with a 2% probability of exceedance in a 50-year period for the planning area ranges between 0.08 and 0.12.

Figure 3-4 National Seismic Hazard Model for Oklahoma (USGS)



A reliable database of past earthquake occurrences across the United States can be found in the USGS Earthquake Catalog. This database shows 8 earthquakes with a magnitude of 3.0 or greater centered within the planning area since January 1, 2015. Earthquakes which have produced noticeable ground shaking within the planning area and centered elsewhere are not included in this figure. Notable earthquakes which have produced perceptible shaking in the City of Stillwater are detailed in Table 3-13.

This analysis shows that 28 earthquakes produced shaking in the planning area between January 1, 2015 and March 31, 2025.



Table 3-13 Notable (M4.0+) Earthquake Events Felt in the Planning Area 2015-2025 (USGS Earthquake Catalog)

Date	Intensity of Shaking in Stillwater (MMI)	Earthquake Magnitude (Mw)	Epicenter Location
January 27, 2015	IV	4.2	2 mi SE of Perry, OK
April 4, 2015	III	4.1	4 mi SE of Marshall, OK
April 8, 2015	III	4.0	4 mi S of Guthrie, OK
April 19, 2015	IV	4.2	4 mi W of Langston, OK
April 27, 2015	IV	4.1	4 mi WSW of Langston, OK
June 14, 2015	III	4.0	4 mi WNW of Lucien, OK
June 17, 2015	III	4.3	4 mi ESE of Covington, OK
July 27, 2015	IV	4.5	2 mi NNE of Crescent, OK
July 28, 2015	III	4.1	2 mi NNE of Crescent, OK
September 18, 2015	III	4.1	2 mi WNW of Cushing, OK
September 25, 2015	III	4.0	1 mi W of Cushing, OK
October 10, 2015	IV	4.3	2 mi W of Cushing, OK
March 29, 2016	IV	4.2	2 mi NNE of Crescent, OK
July 17, 2016	IV	4.2	3 mi W of Lucien, OK
August 17, 2016	III	4.0	1 mi SW of Wellston, OK
September 3, 2016	VI	5.8	9 mi NW of Pawnee, OK
November 2, 2016	IV	4.4	4 mi N of Maramec, OK
November 7, 2016	V	5.0	2 mi W of Cushing, OK
July 14, 2017	IV	4.2	6 mi WSW of Shamrock, OK
December 5, 2017	V	4.1	6 mi SSE of Red Rock, OK
April 7, 2018	IV	4.6	3 mi WNW of Lucien, OK
April 9, 2018	V	4.6	5 mi NNE of Marshall, OK
May 14, 2018	III	4.0	6 mi SSE of Marshall, OK
May 15, 2018	III	4.0	6 mi SSE of Marshall, OK
June 15, 2018	III	4.0	7 mi SSE of Marshall, OK
June 21, 2020	IV	4.2	6 mi NW of Perry, OK



Date	Intensity of Shaking in Stillwater (MMI)	Earthquake Magnitude (Mw)	Epicenter Location
February 5, 2021	III	4.2	3 mi WNW of Lucien, OK
April 6, 2023	IV	4.0	2 mi ESE of Carney, OK

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Considering the 16 earthquakes that have produced shaking felt in the City of Stillwater since January 1, 2015, only 3 have occurred within the last 5 years. Since the mechanism believed to have been the root cause of these events has abated, earthquakes are not expected to return to the frequency, nor the intensity, experienced prior to 2020. Probability calculation for this hazard has been based on the more recent trends during the past 5 years. **Thus, based on the categorizations defined in Table 3-3, and three (3) earthquakes which have produced noticeable shaking in the planning area over the past 5 years, the probability of such an earthquake event occurring on an annual basis is rated as Likely.**

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-14 Vulnerabilities and Impacts to Earthquake in the City of Stillwater

Vulnerability	Impact
Many structures in the City of Stillwater are not constructed to withstand the shearing forces associated with earthquakes.	Occupants of structures that experience a compromise in their integrity as a result of an earthquake are exposed to an enhanced risk to their well-being and potentially their lives. Those at greatest risk are residents who are impoverished and may not have the means to make needed repairs to enhance their home or business’s integrity. Such risks extend to schools across the City, threatening students and staff.
Utility infrastructure, particularly natural gas delivery lines, are at risk of rupture due to earthquake.	Not only are service interruptions possible should this happen, which would pose a risk to vulnerable populations in the City of Stillwater if such an event coincided with extreme cold, but fires may also ignite, which could cascade or compound the risk.



Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Prior to 2009, Oklahoma experienced 1-2 earthquakes per year that were magnitude 3.0 or greater. The rate of M3.0+ earthquakes increased to a peak of about 3 per day in 2015 concurrent with a statewide increase in wastewater injection into deep underground strata (Andrews and Holland 2015). As wastewater injection volumes have declined by over half, compared with 2015, the rate of M3.0+ earthquakes have decreased to less than 1 per day in late 2018. Thus, the future seismic hazard is interlinked with wastewater disposal well activity but will likely remain elevated, compared to background tectonic rates, for at least the next decade (OGS 2017). Note: this section of the Simple Planning Tool is titled 'Climate Change Trends', but in the case of earthquakes please regard this as future trends.

Since earthquakes are geological processes that occur independently of atmospheric effects, climatological changes, or trends of which, will influence the type, location, or range of anticipated intensities of earthquake hazards.

Land Use Development

An important consideration in the level of resilience to earthquake is building standards. Structures built to withstand shearing forces associated with ground shaking will be the ones least likely to fail, and the least likely to result in injuries and fatalities of their occupants.

In Stillwater, however, earthquakes were not common prior to 2009. As such, homes and other structures built before that time were not built with earthquakes in mind. Thus, the majority of existing structures remain vulnerable to damage or destruction as a result of an earthquake. To complicate matters, if damage from a previous earthquake goes unnoticed or otherwise unrepaired due to lack of financial resources or whatever reason, occupants of such a structure are at an increased risk if another earthquake or other triggering event causes further degradation to the integrity of that structure so as to result in its failure.

Risks to the built environment extend to critical facilities and District buildings. Damage resulting from an earthquake would necessitate repairs, inhibiting access to affected buildings. Further effects on students from socioeconomically vulnerable families would result if schools had to be closed and they were denied nutrition they would otherwise receive from meals provided by the school.

Population Patterns

Most earthquake injuries and fatalities occur in buildings from collapsing walls and roofs, flying glass, and falling objects. Residents of the City, as well as students and staff of the District, who lack the proper education or awareness of how to properly protect themselves from these things will be vulnerable to such hazards.



3.4.4. Extreme Heat

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Extreme heat is defined by the U.S. Department of Homeland Security's ready.gov website as a period of high heat and humidity, with temperatures above 90°F for at least two to three days consecutively. Extreme heat causes stress on the human body's internal process to maintain a normal temperature, which can lead to death. Heat is attributed to being the leading cause of weather-related death among all natural hazards.¹¹ Segments of the population at greater risk from extreme heat are those over the age of 65, children under the age of 5, and overweight individuals.

A term that is synonymous with extreme heat is heat wave. It is an extended period of extreme heat. As defined by the National Weather Service Glossary, a heat wave is a period of abnormally and uncomfortably hot and unusually humid weather that lasts two or more days. While heat is frequently accompanied by humid conditions in Oklahoma and can exacerbate the effects of heat, it is not necessarily a prerequisite for extreme heat nor heat waves, since extreme temperatures alone can cause undue stress on the human body.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

As discussed in the 2024 State of Oklahoma HMP, the entire state is subject to experiencing extreme heat. **Thus, extreme heat is a hazard that affects the entire planning area uniformly.**

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

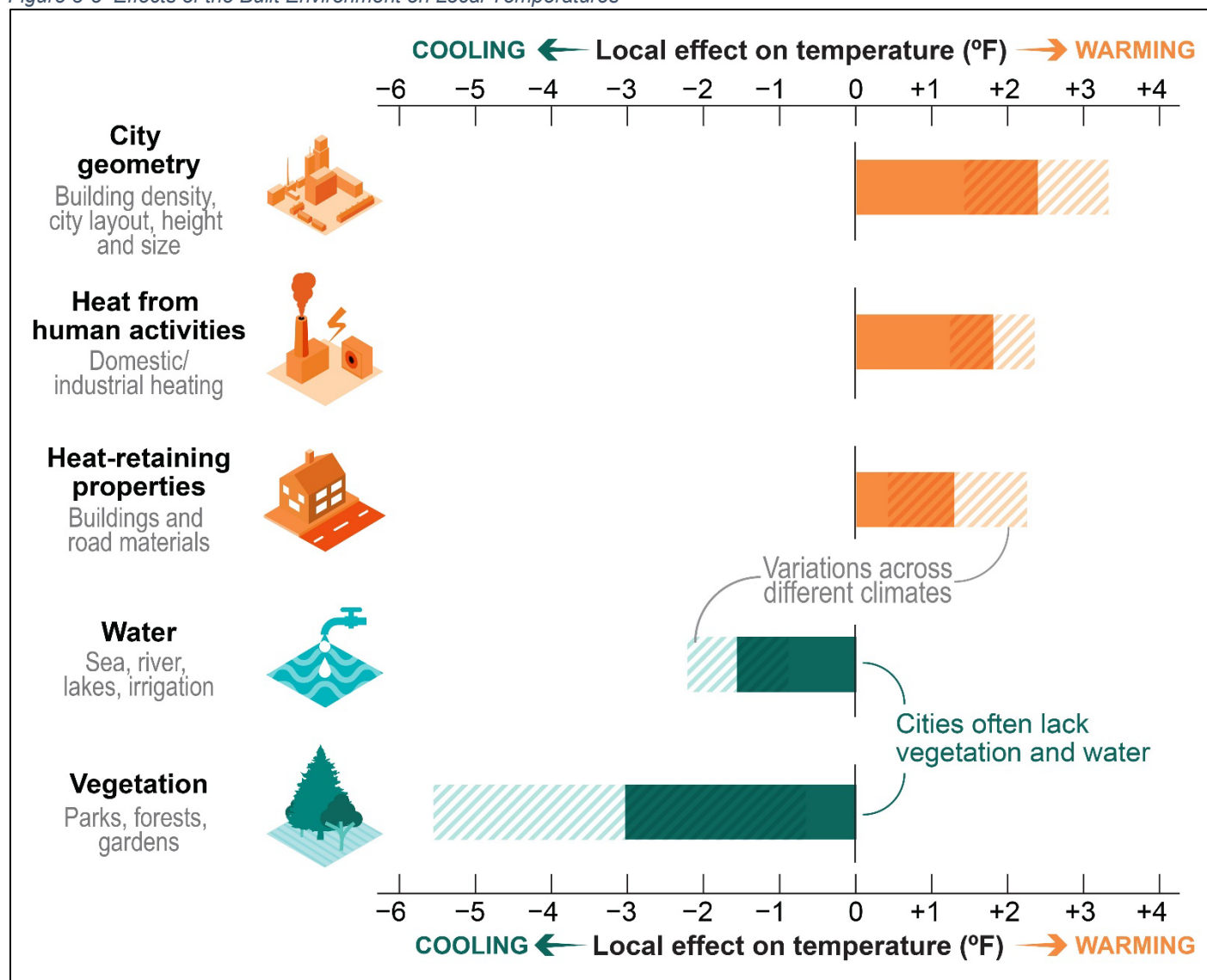
An all-time record maximum temperature in Payne County of 117°F was recorded on July 14, 1954. Payne County, including the City of Stillwater, can expect to experience 69 days each year, on average, with ambient temperatures above 90°F, with 14 of those days exceeding 100°F. These figures are depicted on the maps in Figure 3-6 and Figure 3-7.

Some of the effects of temperature and relative humidity on the human body are displayed in Figure 3-8 to relate heat index to the likelihood of experiencing a heat-related health condition. This chart suggests varying degrees of heat perception, depending upon the combination of relative humidity and temperature. It is separated into different zones, shaded to indicate the likelihood of experiencing symptoms or disorders that could occur depending upon the magnitude or intensity of the heat event, ranging from "Warm" to "Extremely Hot." Heat stress begins to become possible once the threshold to "Very Warm" is crossed, which is indicated by yellow shading. **Residents in the planning area can expect to experience conditions in the "Hot" to "Very Hot" range in this figure, though some periods of "Extremely Hot" conditions will be possible from time to time during periods where the National Weather Service forecast office in Norman issues Excessive Heat Warnings.**

¹¹ [Ready.gov/heat](https://ready.gov/heat)



Figure 3-5 Effects of the Built Environment on Local Temperatures¹²

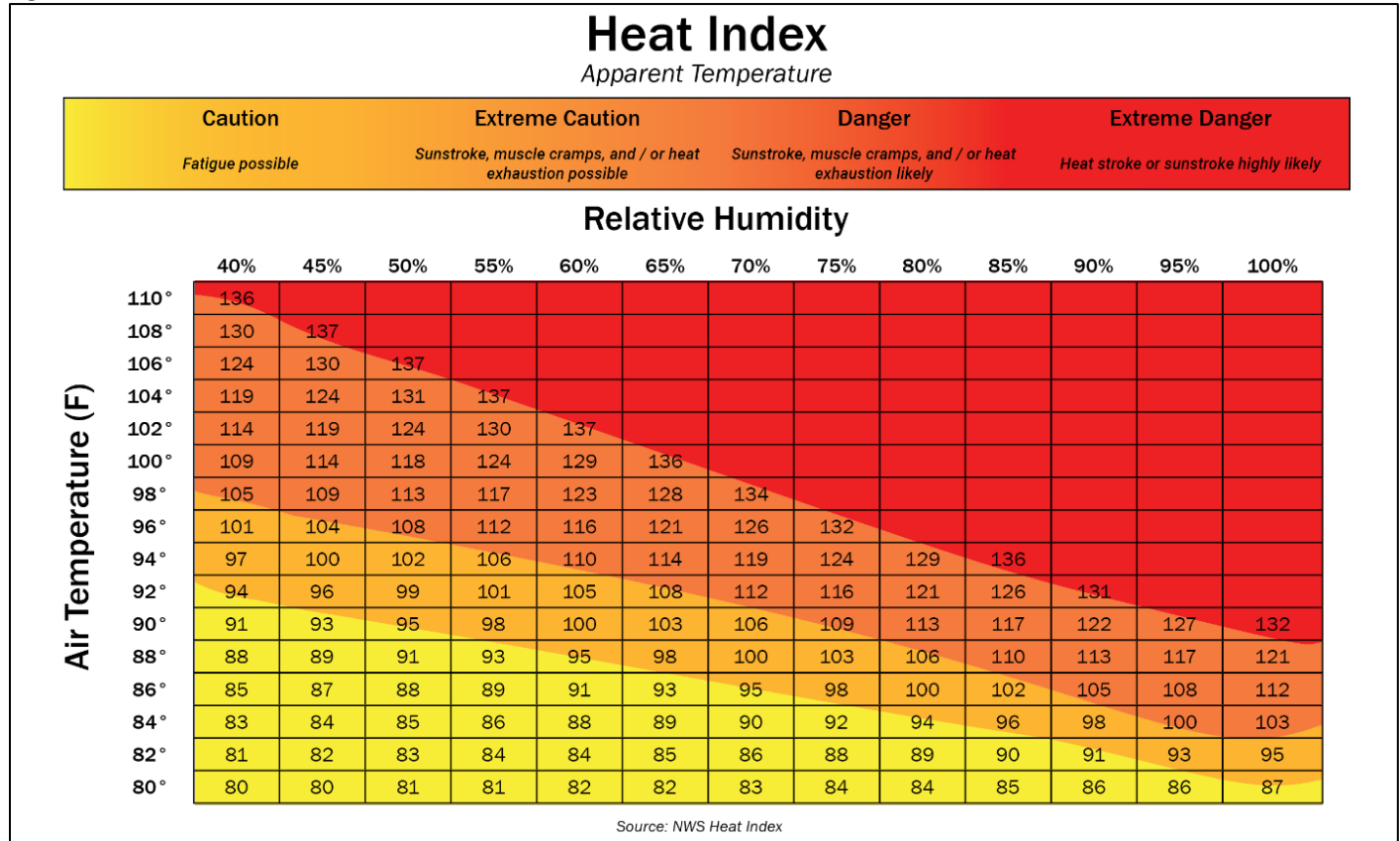


¹² NCA5, <https://nca2023.globalchange.gov/>





Figure 3-8 Heat Indices and Heat-Related Illnesses



As a supplement to heat index, the National Weather Service has created a series of tables related to Wet Bulb Globe Temperature (WBGT) levels and their effects on human health. General guidelines for working or exercising in heightened Wet Bulb conditions have been highlighted in Table 3-15. Other guidelines exist for different at-risk groups (e.g., youth, elderly) and activities (e.g., sports, military training, working outdoors). People who are at risk of exposure to extreme heat should take precautions in addition to the ones listed in Table 3-15. Further discussion of the population within the planning area who may be most at risk can be found in the Vulnerability and Impact narrative within this section. **During the summer months when extreme heat is most likely, residents in the City of Stillwater can expect to experience WBGT values in the High range frequently, while occasional occurrences where WBGT values rise into the Extreme range can also be expected.** Differences between WBGT and Heat Index are displayed in Table 3-16 for reference.

Table 3-15 NWS Composite Guidelines for Working or Exercising in Full Sun

Risk	WBGT	Heat Impacts
Low	80°F - 85°F	Body stressed After 45 minutes.
Moderate	85°F - 88°F	Body stressed after 30 minutes. Heat cramps likely (painful contraction of muscles, weakness).
High	88°F - 90°F	Body stressed after 20 minutes. Heat exhaustion likely (dizziness, nausea, vomiting, headache, fainting, disorientation, weakness).
Extreme	> 90°F	Body stressed after 15 minutes. Heat stroke likely (extremely high body temperature, confusion, convulsions, unconsciousness, death).



Table 3-16 Differences Between WBGT and Heat Index Temperature

Parameters	WBGT	Heat Index Temperature
Measured in Direct Sunlight	Yes	No
Measured in the Shade	No	Yes
Incorporates Air Temperature	Yes	Yes
Incorporates Relative Humidity	Yes	Yes
Incorporates Windspeed	Yes	No
Incorporates the Sun Angle	Yes	No

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

In Oklahoma, July and August are climatologically the hottest months of the year. Based on averages for Payne County listed by the Oklahoma Climatological Survey, the City of Stillwater experiences an average daily maximum temperature of 93.2°F in July and 93.0°F in August.

Between January 1, 2015, and December 31, 2024, Payne County, including the City of Stillwater, has experienced twenty-eight (28) extreme heat events, as recorded in the NCEI database. Specific impacts reported by participating jurisdictions are listed in Table 3-17.

Table 3-17 Notable Extreme Heat Events in the City of Stillwater, 2015 to 2024 (NCEI)

Date	Max Temp (°F) *	Min Temp (°F) *	Max Heat Index (°F)
June 29, 2023	100	77	115
July 12-18, 2023	105	79	115
August 1, 2023	104	80	115
August 4, 2023	103	82	115
August 11-13, 2023	100	79	115
August 19-25, 2023	106	78	115
June 23-29, 2024	104	81	110
July 15, 2024	105	77	110
July 31 – August 1, 2024	103	79	110
August 13-18, 2024	104	79	110
August 24, 2024	101	82	110

* - Max and Min temperatures in this table are those recorded at Stillwater Regional Airport. For timeframes that span more than one day, the temperatures depicted in the table are the highest temperatures observed for the max temp and min temp during these periods.



Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and twenty-eight (28) occurrences of extreme heat recorded in Stillwater over the past 10 years, the annual probability of this hazard is rated as **Highly Likely**.

More details on the factors considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-18 Vulnerabilities and Impacts to Extreme Heat in the City of Stillwater

Vulnerability	Impact
Undue strain on the electrical power grid as a result of increased electricity usage by consumers seeking comfort through air conditioning can lead to disruption to delivery, including brownouts and blackouts.	Complete or partial loss of electrical service during periods of extreme heat can increase the risk to lives and health of vulnerable sectors of the City of Stillwater’s population. Medical emergencies may cause a spike in 911 calls and place a strain on local and regional medical facilities. Additionally, blackouts or brownouts may affect schools and their ability to conduct in-person instruction. Such cancellations would have a cascading detrimental effect on students who rely on meals and other services provided by their school.
People, particularly workers, who spend time outdoor during extreme heat are at risk if not provided frequent breaks and adequate opportunities to cool down.	Risks to health and well-being of those exposed to extreme heat exist and increase in relationship to the amount of exposure time. Risks to health from extreme heat become exacerbated when human psychology factors into play. Anyone working outside during these events who has the mindset, or is under the influence of the mindset, of “toughing it out” or “powering through” may push their body beyond its limits. These effects may be experienced by residents in the City of Stillwater.



Vulnerability	Impact
Athletes and other students of Stillwater Public Schools who spend time outdoors during periods of extreme heat are at risk.	Risks to health and well-being of those exposed to extreme heat exist and increase in relationship to the amount of exposure time. Risks to health from extreme heat become exacerbated when human psychology factors into play. Anyone who spends enough time outside during these events who has the mindset, or is under the influence of the mindset, of “toughing it out” or “powering through” may push their body beyond its limits.

Heat kills by pushing the human body beyond its limits. Under normal conditions, the body's internal thermostat produces perspiration that evaporates and cools the body. However, in extreme heat and high humidity, evaporation is slowed, and the body must work extra hard to maintain a normal temperature.

Young children, elderly people, and those who are sick or overweight are most vulnerable to the effects of extreme heat. Another segment of the population at risk is those whose jobs consist of strenuous labor outside. When temperatures reach 90 degrees and above, people and animals are more likely to suffer sunstroke, heat cramps, and heat exhaustion.

Another extreme heat hazard is air pollution. During summer months, consistent hot temperatures and stagnant airflow patterns cause a build-up of hydrocarbons to form a dome-like ceiling over large cities. An abundance of factories, automobiles, lawn equipment, and other internal combustion machines that emit high particulate matter builds and worsens with an increase in temperature. Resultant stagnant, dirty, and toxic air does not move away until a frontal boundary crosses the planning area to disperse it.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

The frequency and intensity of heatwaves and extreme heat events have increased across the United States since the mid-1960's (Wuebbles et al. 2017b). Warming in Oklahoma has occurred mostly during the winter and spring seasons (Frankson et al. 2022). As the global temperature continues to increase, the occurrence and intensity of extreme heat events are projected to increase as well (Wuebbles et al. 2017b). As seen from the Climate Explorer tool, the average temperature across Oklahoma is projected to increase by up to 7°F and the number of days over 100°F could increase by ~15-45 days per year by mid-century, depending on the emissions scenario. Read more about future heat extremes in Climate Change Science and Projection Resources.

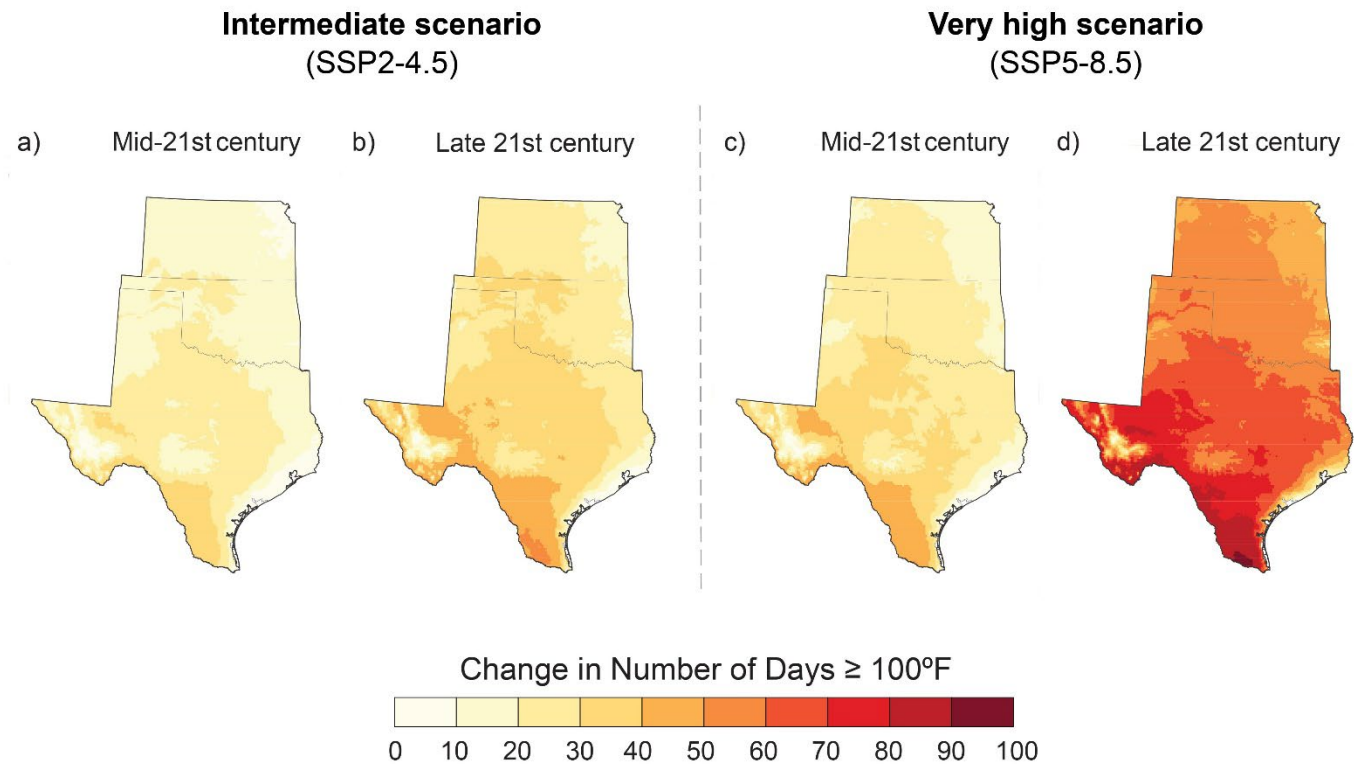
Land Use Development

Existing structures, particularly older ones that were built to lesser or no building code standards, may lack air conditioning or other cooling mechanisms that provide relief to people during periods of extreme heat. Occupants of these structures who are inside during extreme heat events will experience risks to their health and potentially their lives.



Figure 3-9 Projected Change in Annual Number of Days $\geq 100^{\circ}\text{F}$ ¹³

Projected Change in Annual Number of Days of 100°F or Higher



Current and future development constructed to meet 2018 ICC International Residential Code standards, which is the set of standards adopted by the City of Stillwater, at a minimum will be better protected from the effects of extreme heat than those that have not been and are not. Ensuring sufficient insulation and proper building materials recommended in this set of codes can reduce the extent of heat that infiltrates a building during periods when electrical cooling methods are not available. Repairs or construction that meet higher standards or exceed those outlined in the 2018 ICC International Residential Code will prove to be more resilient to the infiltration of extreme heat during periods when air conditioning or other interior climate control methods are not available.

Population Patterns

Continued population growth in Stillwater naturally translates to an increase in the number of people potentially exposed to extreme heat. Such risks become exacerbated when new residents, or students at Oklahoma State University, who have not been exposed to these conditions, and do not have the education or awareness to cope with extreme heat, are suddenly confronted with this hazard.

¹³ NCA5, <https://nca2023.globalchange.gov/>



Figure 3-10 Heat and Health Equity¹⁴



3.4.5. Fire/Wildfire

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Fire can occur anywhere in the planning area, though the nature of a fire's cause can vary considerably. Three types of fire can pose significant threats to Stillwater: wildfire, urban conflagration, and structure fire. Wildfire can be characterized as any outdoor fire that is not controlled, supervised, arranged, or otherwise permitted by local authorities. It commonly occurs in rural and undeveloped areas but can encroach upon and spread into areas that are more urban and developed. Urban conflagrations are outdoor fires that occur in urban and developed areas and spread throughout a community(s). Structure fires, which begin inside a building, can engulf an entire structure under the right conditions then spread to adjacent properties and structures. Each of these three types of fire described can result in widespread damage to property and pose a threat to life and health of the City's residents.

¹⁴ NCA5, <https://nca2023.globalchange.gov/>



Wildfire

According to FEMA P-737, wildfires in the United States are “a common, natural, and essential occurrence” in forests, woodlands, and grasslands.¹⁵ Under conditions monitored by professionals, wildfires can be beneficial in revitalizing the ecosystem and reducing accumulated vegetation. However, wildfires under uncontrolled circumstances can threaten lives, property, and resources.

Wildfire conditions include (but are not limited to) the amount, type, distribution and proximity of vegetation; the flammability of the area structures (homes, businesses, outbuildings, decks, fences), average lot size; road construction; weather patterns, general climate conditions and hydrology; and area topography. Although WUI conditions exist in every state, the long hot, dry summers in Oklahoma and Stillwater increase the likelihood of wildland interface areas.

The 4 categories of wildfires experienced throughout the United States are:

1. Interface or intermix fires are fires that are fueled by both wildland vegetation and the built-environment.
2. Firestorms are events of such extreme intensity that effective suppression is virtually impossible. They occur during extremely dry weather and generally burn until conditions change, or available fuel is exhausted.
3. Prescribed fires are those that are intentionally set or selected natural fires that are allowed to burn for beneficial purposes.
4. Wildland fires are fueled by natural vegetation and typically occur in national forests and parks.

Urban conflagration

An urban conflagration is a large, destructive fire that spreads beyond natural or artificial barriers¹⁶. It affects urban and developed areas and can destroy and damage whole sections within a city. It can be expected to result in large monetary loss and can pose a threat to the lives and wellbeing of residents in affected areas.

An urban conflagration is similar to wildfire, but spreads within a community or developed area as opposed to rural and undeveloped areas. Wildfires that spread into developed areas, though, can become urban conflagrations.

Structure fire

A structure fire is one that burns a home or other improved structure. In addition to the risk of burns sustained by exposure to fire, and even death, smoke from fires can cause an inhalation and exposure hazard to human health as well. These risks are enhanced in structure fires, which can complicate evacuation efforts for individuals inside the burning building and pose a risk to firefighters who are called upon to respond to the fire.

Structure fire, for the scope of this plan, will focus on fires that are ignited within a structure. If a structure becomes engulfed and conditions cause this fire to spread to adjacent properties and structures, it then will be considered an urban conflagration. The key delineation between the two types of fire as discussed here lies in whether the fire is contained to the structure of its origin or if it spreads beyond the property, or parcel, on which the structure is located.

¹⁵ https://defensiblespace.org/wp-content/uploads/2021/01/FEMA_2008_P-737-Home-Builders-Guide-to-Construction-in-Wildfire-Zones.pdf

¹⁶ <https://books.google.com/books?id=-lbqInWXhLEC&q=%22urban+conflagration%22&pg=PA180>



Location

Element B1-b. Does the plan include information on the location of each identified hazard?

While all of the City of Stillwater experiences risk to fire and wildfire, risks to the three different types of fire identified in the description section above vary across the planning area.

Stillwater is located within the Cross Timbers Transition ecoregion, which is characterized by rough plains covered by prairie grasses and trees such as eastern red cedar, scattered oaks, and elms. This region is a transition zone which lies between grass-covered plains to the west and hilly, oak savanna to the east. Red cedar trees have recently gained a reputation as an invasive species in Oklahoma, and a species of tree that poses a unique danger during wildfire events. More on red cedars can be found in the Vulnerability and Impact section of this hazard profile.

When it comes to wildfires, Wildland-Urban Interface is a critical area where the built environment is at risk of exposure. Wildland-Urban Interface (WUI) is defined by the U.S. Fire Administration as the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.¹⁷ To determine the extent of this area, the density of structures (per acre) and population (per square mile) are used. WUI can be divided into two categories: intermix and interface. While both are characterized by having more than one house per 40 acres, the difference between the two lies in the cover of vegetative fuels. Interface is characterized by areas with less than 50% vegetation, while intermix has greater than 50% vegetation. Interface areas are also within 1.5 miles of an area greater than 1,235 acres that is more than 75% vegetated. WUI for the City of Stillwater was obtained through the Southern Group of State Foresters Wildfire Risk Assessment Portal. Based on the best available data and analyses, the WUI can be used to determine areas of fire hazard location within Stillwater, as shown in the extent section.¹⁸

All structures in Stillwater are at risk, to varying degrees, of structure fire and urban conflagrations. Factors that influence the level of risk include average age of structures in an area, density of structures, type of construction, building materials used, building codes, existence of defensible space around structures, and distance of the structure to the closest fire station and from heavily vegetated areas. Those areas in the City at greatest risk to wildfire are depicted in areas within the bounds of each that coincide with the WUI depicted in Figure 3-11. A unified metric or rubric for evaluating the extent of risk for urban conflagration and structure fire does not exist at the time of this plan's development. With that said, a combination of factors, both natural and human, such as those in Table 3-20 can be used to assess the extent of urban conflagration risk.

Considering the factors in Table 3-20, the potential for fire to spread rapidly throughout the planning area and produce catastrophic losses exists, if a favorable combination of conditions from each of the variables identified were to coincide simultaneously.

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

Measuring the risk of wildfire development is best conducted when local influencing factors are considered. In Oklahoma, the Oklahoma Fire Danger Model is a comprehensive tool developed by the Oklahoma Mesonet to assess the level of wildfire risk by community based on the four fire danger indices that make up the National

¹⁷ <https://www.usfa.fema.gov/wui/what-is-the-wui.html>

¹⁸ [SGSF WRAP - Home \(southernwildfirerisk.com\)](https://www.southernwildfirerisk.com/)

Burning Index relates temperature, relative humidity, wind speed, and solar radiation to the “relative greenness” of vegetation taken from satellite measurements and fuel models for native vegetation assigned on a 1-kilometer grid. It rates fire danger related to potential flame length over a fire danger rating area and is expressed as a numeric value related to potential flame length (in feet) multiplied by 10. This scale is open-ended, which allows the range of numbers to adequately define fire problems.¹⁹

Energy Release Component is a measure of potential available energy for a fire to burn at the head of a fire, within the flaming zone, in BTU per square foot. This quantity is related to SC and is dependent upon the same fuel characteristics: loading, compaction, particle size (fineness), heat of combustion, and mineral content. ERC is calculated as a result of predictions of the rate of heat release per unit area during flaming combustion and the duration of flaming. It is also variable on a day-to-day basis, like the SC.

Factors which are fed into the OFDM include observed Mesonet data and 84-hour weather forecasts output by the North American Mesoscale (NAM) forecast model, as well as daily 500 m resolution relative greenness data, a 500 m resolution Oklahoma NFDRS fuel model map, current and forecast dead fuel moisture content from a calibrated version of the Nelson dead fuel moisture model, live fuel moisture calculated from the relative greenness data, and daily updated Keetch-Byram Drought Index values.

Based on all factors integrated into the OFDM discussed above, the planning area can expect to experience the full range of values listed in Table 3-19.

OFDM	BI	Flame Length	Description
Low	< 20	< 2 ft	Fuels do not ignite readily from small firebrands although a more intense heat source, such as lightning, may start fires in duff or punky wood. Fires in open cured grasslands may bum freely a few hours after rain, but woods fires spread slowly by creeping or smoldering, and bum in irregular fingers. There is little danger of spotting.

22 Mesonet | OK-FIRE



OFDM	BI	Flame Length	Description
Moderate	20 – 40	2 – 4 ft	Fires can start from most accidental causes, but except for lightning fires in some areas, the number of starts is generally low. Fires in open cured grasslands will burn briskly and spread rapidly on windy days. Timber fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel, especially draped fuel, may burn hot. Short-distance spotting may occur but is not persistent. Fires are not likely to become serious and control is relatively easy
High	40 – 80	4 – 8 ft	All fine dead fuels ignite readily, and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High intensity burning may develop on slopes or in concentrations of fine fuels. Fires may become serious and their control difficult unless they are attacked successfully while small.
Very High	80 – 110	8 – 11 ft	Fires start easily from all causes and, immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high intensity characteristics such as long-distance spotting and fire whirlwinds when they burn into heavier fuels.
Extreme	> 110	> 11 ft	Fires start quickly, spread furiously, and burn intensely. All fires are potentially serious. Development into high intensity burning will usually be faster and occur from smaller fires than in the very high fire danger class. Direct attack is rarely possible and may be dangerous except immediately after ignition. Fires that develop headway in heavy slash (trunks, branches, and treetops) or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions, the only effective and safe control action is on the flanks until the weather changes, or the fuel supply lessens.

A unified metric or rubric for evaluating the extent of risk for urban conflagration and structure fire does not exist at the time of this plan's development. With that said, a combination of factors, both natural and human, such as those in Table 3-20 can be used to assess the extent of urban conflagration risk.

Considering the factors in Table 3-20, the potential for fire to spread rapidly throughout the planning area and produce catastrophic losses exists, if a favorable combination of conditions from each of the variables identified were to coincide simultaneously.



Figure 3-11 Wildland-Urban Interface (WUI) across the planning area

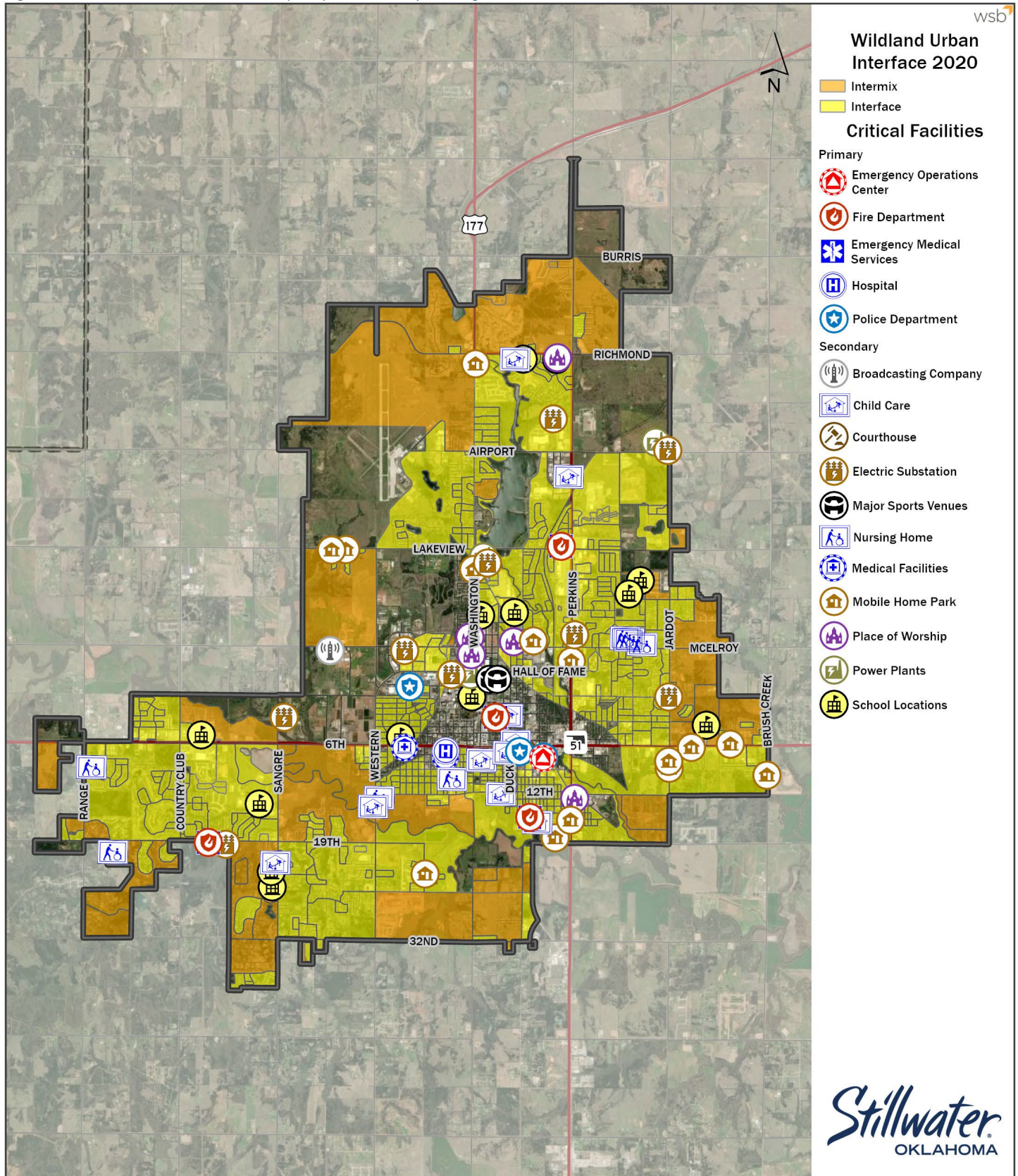




Table 3-20 Variables and Factors which Affect Urban Conflagration Risk

Variables	Factors
Weather conditions	Wind speed, relative humidity, drought intensity, lack of rainfall
Vegetation	Distance from structures, height of vegetation, “greenness” of vegetation, species (with respect to the nature of combustibility and burning), slope of terrain
Building codes/materials	Non-combustible freeboard, vents with < 1/8” openings, non-combustible roofing and siding materials, fire-resistant glass in windows
Urban planning	Setback requirements, lot/parcel size, defensible space requirements, density of structures in a given area, development within WUI zones
Fire Suppression	Existence of sprinklers inside the structure or on the parcel/lot, presence of fire retardant or fire deterrent materials (such as fire-retardant gels and fire extinguishers), distance from fire hydrants and fire stations, available water supply and pressure

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Though wildfires are natural occurrences that can serve to regenerate the earth by allowing important nutrients in burnt vegetation to re-enter soils, they become a hazard when communities, and the residents and businesses that comprise them, become threatened.

NCEI’s database contains two wildfire events in Payne County between January 1, 2015, and December 31, 2024, depicted in Table 3-22. It should be made clear that while NCEI can be used as a comprehensive database for hazards that are directly related to weather, hazards indirectly related to weather, like wildfires are not reported and recorded in this database as extensively. Additionally, there may be discrepancies in the numbers from each source due to differences in data recording and data-keeping methods. Hence, this analysis of previous occurrences of wildfire is supplemented by data from the National Interagency Fire Center’s Wildland Fire Incident Location database, which is supported by data from each of these occurrences between 2015 to 2024 listed in Table 3-21. This database shows 2 occurrences of wildfire in or near Stillwater between January 1, 2015 and December 31, 2024 which produced a total of \$1,908 in damage. It should be noted that dollar damage amounts were not available for every occurrence in this database. Further, due to the recency of the Stillwater incident and the fact that recovery and assessments are still being conducted during this plan’s development, data on this event in the National Interagency Fire Center’s database included in Table 3-21 should be considered incomplete at the time of this plan’s development.



Table 3-21 Wildfire Impacts in and near Stillwater, OK (NIFC)

Date (begin)	Date (end)	Wildfire Incident	Size (acres)	Cause	Damage (USD)
November 23, 2022	December 14, 2022	East Bell	0.1	Human	n/a
March 16, 2025	n/a	Stillwater	7,639	Undetermined	\$1,908

Table 3-22 Fire Events in Payne County, 2015 - 2024 (NCEI)

Date	Narrative
January 30, 2018	The Orlando86 fire burned approximately 169 acres in Payne County on the 30th.
October 29-30, 2024	Despite minimum afternoon relative humidities (RHs) remaining above 40%, very strong southerly wind gusts and highly volatile fine fuels combined to trigger a regional outbreak of wildfires across central and northern Oklahoma on the 29th. The Eucsee Creek Fire burned 1,279 acres in southeastern Payne County, near the community of Cushing. The control/end time of the fire is estimated.

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and 4 distinct wildfire events on record in the NIFC database and NCEI database in and near the City of Stillwater between January 1, 2015 and October 31, 2024, the annual probability of fire and wildfire affecting the planning area is rated as **Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled "Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns."



Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-23 Vulnerability and Impact to Fire/Wildfire in the City of Stillwater

Vulnerability	Impact
Given the right combination of fuel, ignition source, and weather conditions, a real and tangible threat for urban conflagration risk exists in the City of Stillwater .	As the fires that affected Los Angeles County in California grabbed national headlines a few months prior to the initiation of this plan's process of development, and the occurrence of wildfires that affected the City of Stillwater during the period of initiation of the planning process for this plan, the City's risk of urban conflagration has recently experienced a heightened awareness among City officials and residents. Should optimal conditions for urban conflagration to converge and affect Stillwater, extensive damage, destruction, and threats to residents' health, well-being, and lives would result. Such risks are heightened for the City's disadvantaged residents.
Wildfire occurrence, which commonly coincides with periods of severe drought, can place a strain on water availability needed in order to contain such blazes.	Also common during periods of drought are sunny days with strong winds. Such a combination can allow for rapid advancements and growth of wildfires. Inability to contain wildfires on days like this can endanger the well-being and lives of residents within the City of Stillwater and the built environment for both jurisdictions.
Health risks posed by wildfires can affect residents of the City. Risks are heightened for those with chronic respiratory conditions like asthma and emphysema, however all people in these jurisdictions may be at risk of smoke inhalation.	Even if a fire is not present within the boundaries of the City , smoke from nearby wildfires can blanket these areas, which may cause inflammation of chronic conditions or even a smoke inhalation risk for otherwise healthy people. A cascading impact resulting from this would place a strain on Stillwater's healthcare infrastructure, and its ability to provide adequate treatment and services when a spike in need arises.



Vulnerability	Impact
Wildfire which impinges upon the WUI and transitions to urban conflagration, similar to or worse than the March 2025 event, holds the potential to test and put a strain on City resources to respond and protect the community.	A real-life vulnerability/impact scenario for this case manifested in March 2025 when wildfires prompted officials in the City of Stillwater to protect the residents and interests and prevent the fire from transitioning to an urban conflagration event. During the planning process, City officials noted that resources were strained during the response. In addition to the City only having four fire stations, availability of water needed to fight the fire was an issue, since for each gallon of water that was treated at the City's Water Treatment facility, one had to be devoted to the firefighting efforts.
Only four fire stations comprise the City of Stillwater's Fire Department. During large-scale wildfire scenarios such as that which affected the planning area in March 2025, the size of the fire and its rate of spread have, and can in future events, outpace the ability of firefighters to establish control over such fires.	Unless afforded the ability to expand their Fire Department, the City of Stillwater risks wildfire impinging upon the WUI and transitioning to urban conflagration. Such a scenario would pose a risk to all buildings and residents in the City, including students, staff, and school facilities across town.
Residents have expressed uncertainty about how to receive information about wildfire threats to the community during these events.	A lack of awareness for where to receive information about wildfire threats can cause residents to be in a situation where a fire encroaching upon their location poses a dire risk to their health and well-being.

Local emergency management and fire response officials in Oklahoma have observed a risk with red cedar trees during wildfires. Red cedars can burn quickly and act as a ladder fuel, which allows fire to climb into the crowns of taller trees. Not only does this species cause the potential for reduced water supply, which can affect fire response, and drying up adjacent grasslands, which can increase the available fuel for wildfires, it is itself considered a hazardous fuel for wildfire. It has even noted that this species can explode when ignited, which is a result of these trees being packed with oils and poses an additional risk to first responders. It is because of the hazards described here associated with eastern red cedar that the State Legislature is considering a bill to reduce the growing threat of wildfires by tackling the overpopulation of these trees.

Red cedars were one factor in combination with other fuels and factors such as weather and weather patterns, contributed to wildfires which produced significant impacts to the City in March 2025. Since Stillwater is located in an area where vegetation that dries out during the drier winter, which typically sees less precipitation relative to other parts of the year, as it enters its dormant phase and becomes green again during the spring as precipitation increases. During this event, vegetation around the City and surrounding areas had yet to "green up" from its dormant winter phase. A strong low pressure system which produced intense, sustained winds up to 60 mph, with gusts up to 70 mph, combined with low humidity and an ongoing moderate drought to set the stage for any fires that did develop to spread rapidly. Such was the case during this event, which quickly transitioned from a rural one to one that impinged upon the City's WUI. Firefighting resources became strained as each gallon that was treated at the City's Water Treatment Plant was required to protect residents and interests in the City from seeing the fire transition to an urban conflagration.



Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Between 1984 and 2011, the number of large wildfires increased in the Southern Plains, which includes Oklahoma (Wehner et al. 2017). Wildfires in Oklahoma are dependent upon current weather conditions, seasonal climate patterns, vegetation conditions, and an available source for ignition (such as a spark, flame, or intentional). Given this complex relationship, the future trend for wildfire is also complex. However, projected increases in temperatures that can dry fine fuels such as grasses and enhanced wet/dry cycles that promote vegetation growth and drying or dormancy, coupled with population growth along the wildland-urban interface, suggests the risks of wildfires is likely to continue to increase. Read more about future wildfire risk in Climate Change Science and Projection Resources.

Land Use Development

Existing buildings which have been constructed or retrofitted to meet or exceed current building code standards are those which will be most likely to minimize the probability of damage and destruction due to fire. Even so, all buildings have some level of risk to structural fire. Even greater is the risk of wildfire to encroach upon the built environment in Stillwater and transition to an urban conflagration scenario. Such a situation underscores the importance of sound land use and development practices in areas identified as WUI Interface or Intermix, and areas of identified heightened wildfire risk. Figure 3-12 below identifies critical facilities and structures in and near the WUI.

Higher building standards, new construction technology, methods, and materials, and improved fire response can all contribute to mitigation fire risk posed to future development. Additionally, implementing recommendations²³ set forth by the Insurance Institute for Business and Home Safety (IBHS) to protect structures from the risks of urban conflagration can further enhance the resilience of Stillwater risks posed by fire, urban conflagration, and wildfire.

Built environment in the City which pose the highest impact risk to wildfires are critical facilities located in areas identified as WUI. Such structures and their locations relative to WUI areas are depicted in Figure 3-12.

Population Patterns

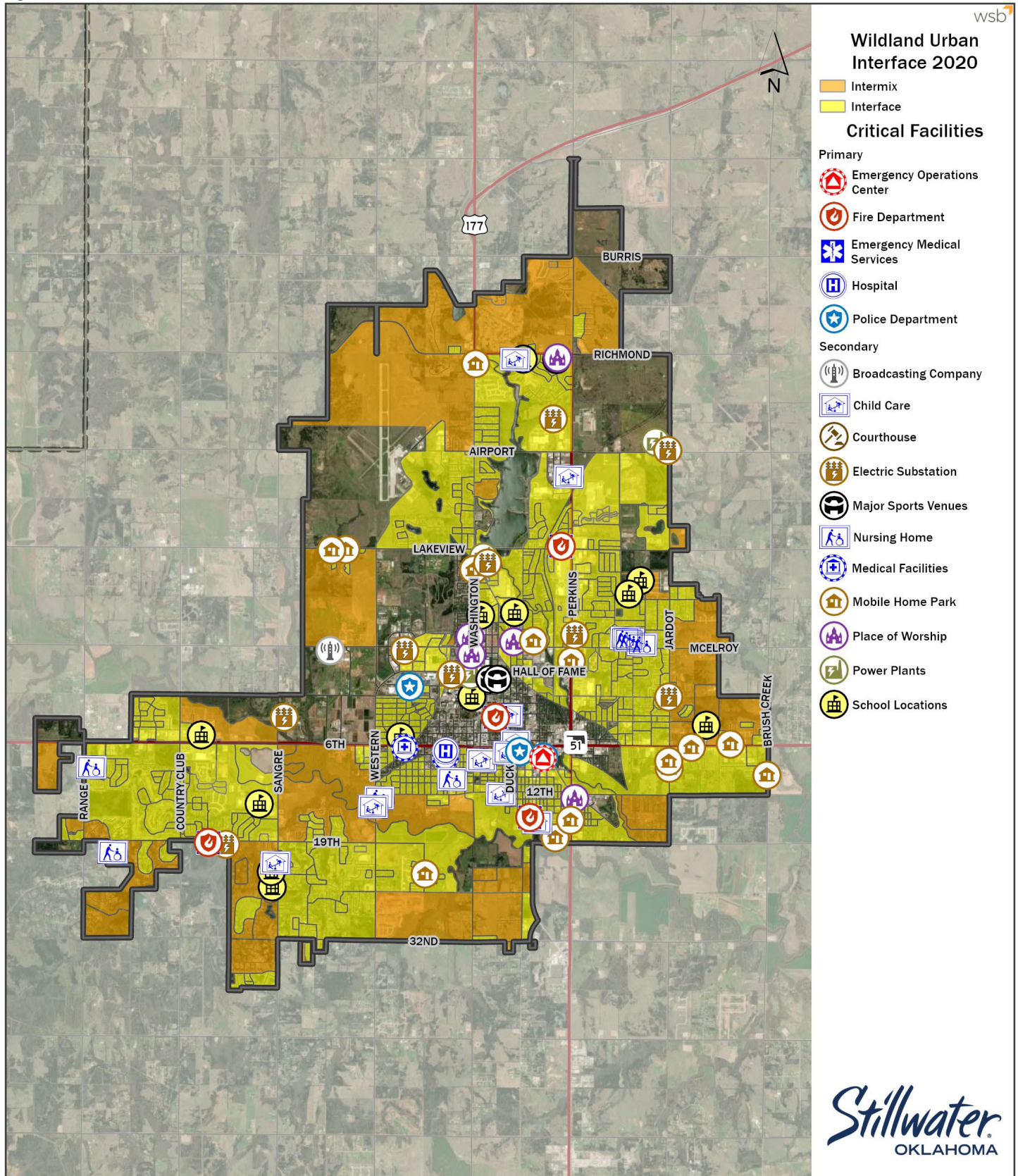
People are directly endangered during fire events of all types. Residential fires can result in injury or death of civilians and first responders. Grass fires can also endanger people. Fire alarms, evacuation routes, extinguishers, sprinkler systems, and preventative measures all are aimed at limiting the threat to human health. In addition, fires can result in heavy financial losses and disruptions to individual's lives.

Assuming continued growth of Stillwater's population, a corresponding increase in the risk of exposure can be correlated due to an increase in the number of people potentially exposed to fire and wildfire.

²³ <https://ibhs.org/risk-research/wildfire/>



Figure 3-12 Stillwater Critical Facilities in the WUI





3.4.6. Flood

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

FEMA and the NFIP define flood as a general and temporary condition of partial or complete inundation of 2 or more acres of normally dry land area or 2 or more properties (at least one of which is the policyholder's property) from:

- Overflow of inland or tidal waters, or
- Unusual and rapid accumulation or runoff of surface waters from any source, or
- Mudflow, or
- Collapse or subsidence of land along the shore of a lake or similar body of water because of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.²⁴

Flooding is commonly grouped into three categories: Riverine, Coastal, and Shallow. Since coastal flooding refers to flooding of locations that interface with a large body of water such as an ocean, sea, or gulf, this type of flooding will be omitted from consideration in this plan given that Stillwater's location is considered to be landlocked. In addition to riverine and shallow flooding, urban flooding will also be examined in this section, due to the unique factors that cause this type of flooding. Flash flooding is commonly discussed as well and will be integrated into the discussion on riverine flooding.

Riverine

Riverine flooding occurs from excessive rainfall in upstream areas that forces the water level in affected watercourses to rise and overflow their normal banks, producing inundation in the adjacent floodplains. Riverine flooding is typically a gradual process, developing over the course of several hours to several days, which allows for ample lead time to warn communities downstream of the impending risk. However, this type of event also usually affects an area for a longer period than urban or flash flooding and often causes more damage due to the length of time of inundation of structures, the velocity and depth of water, and floating debris.

Flash flooding

Flash flooding is most commonly associated with large convective thunderstorms and can produce heavy rainfall amounts within a short period of time. This type of flooding can be exacerbated by soils that are already saturated by previous rainfall or flooding. Saturated soils act to increase runoff, thereby increasing stream levels further and more quickly. When heavy rainfall converges in watercourses and valleys suddenly, it moves downhill and downstream with great velocity, which can limit lead time for warnings for communities and interests in the path of the flood. Due to its great velocity, flash floods produce great force which can uproot trees, carry away structures, and destroy roads and bridges. Commonly referred to as a "wall of water", flash flood waves can contain large amounts of debris and hazardous materials. Despite its short-lived nature relative to more typical riverine flooding, this type of flooding is considered to produce a high risk to life and property.

²⁴ <https://www.floodsmart.gov/definitions#F>



Shallow

FEMA defines shallow flooding as flooding with an average depth limited to 3.0 feet or less where no defined channel exists. This type of flooding typically occurs in areas with flat topography, or in areas with localized depressions, such as playas which are common in west Texas. Overland flow is also characterized as shallow flooding, as are overbank flows independent from the main channel²⁵.

Urban

Urban flooding occurs when heavy rainfall that falls on the built environment in a developed area runs off of impervious surfaces such as structures and paved areas, causing natural drainage channels and drainage infrastructure to become overwhelmed. When drainage infrastructure becomes obstructed by debris, it can exacerbate this type of flooding. This type of flooding usually results in transportation thoroughfares becoming impassable and can cause flood levels to rise enough to inundate structures along these routes, as well. This type of flooding is unique to the others since it is caused by overwhelmed drainage systems in developed areas.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

While the entire area encompassed within the City of Stillwater is susceptible to flooding, there are localized areas within these bounds that possess a higher risk, which are discussed further below.

Stillwater Creek and Boomer Creek represent the two primary watercourses within the planning area, the majority of which is classified within the Stillwater Creek Watershed. Stillwater Creek flows from west to east through the southern portion of the City, while Boomer Creek flows from north to south through the central portion of Stillwater, starting at Boomer Lake. Other creeks across the planning area feed into these two streams, which converge southeast of Stillwater.

Floodplain management in the United States, generally speaking, is based on the 1% annual chance, or 100-year, flood, which is a measure of extent, and will be discussed in the next section. It is worth mentioning here, since the floodplains defined by this measure denote the areas in Stillwater where the risk of flooding is greatest and form the basis for much of Stillwater's floodplain regulatory structure. Not all flooding is confined to the 1% annual chance floodplain, however. As discussed in the previous section, streets are subject to urban flooding, which can even produce inundation in homes, schools, and businesses, and are not assessed when determining flood risk or frequency.

²⁵ Information sourced from "Guidance for Flood Risk Analysis and Mapping: Shallow Flooding Analyses and Mapping", published by FEMA in November 2016

[illegible]



Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

As mentioned in the previous section, floodplain management in the United States, generally speaking, is based on the 1% annual chance, or 100-year, flood. FEMA has established the Special Flood Hazard Area (SFHA), also known as the 1% or 100-year flood level, as the base flood elevation (BFE) for planning and development along waterways. As a part of its regulatory function, the National Flood Insurance Program (NFIP), has established zones which have been used in Flood Insurance Rate Maps (FIRMs). These zones, laid out in Table 3-24, allow the NFIP to determine flood insurance rates for properties according to their zone.

FIRMs are updated as conditions within a community affect the 1% floodplain change. **Historically, Stillwater has experienced water as deep as 5 feet during flood events and can continue to expect flooding up to this standard, especially during heavy rainfall events, or when rainfall rates reach about 2 inches per hour.**

May 16, 2007, represents the effective date of Stillwater's FIRMs. Stillwater participates in the NFIP as well as the Community Rating System (CRS) program, which rewards residents in communities who go above and beyond the minimum requirements of the NFIP with discounts on NFIP flood insurance. More details on NFIP and CRS are discussed in Section 4.2

Table 3-24 FEMA Flood Insurance Rate Map (FIRM) Zones

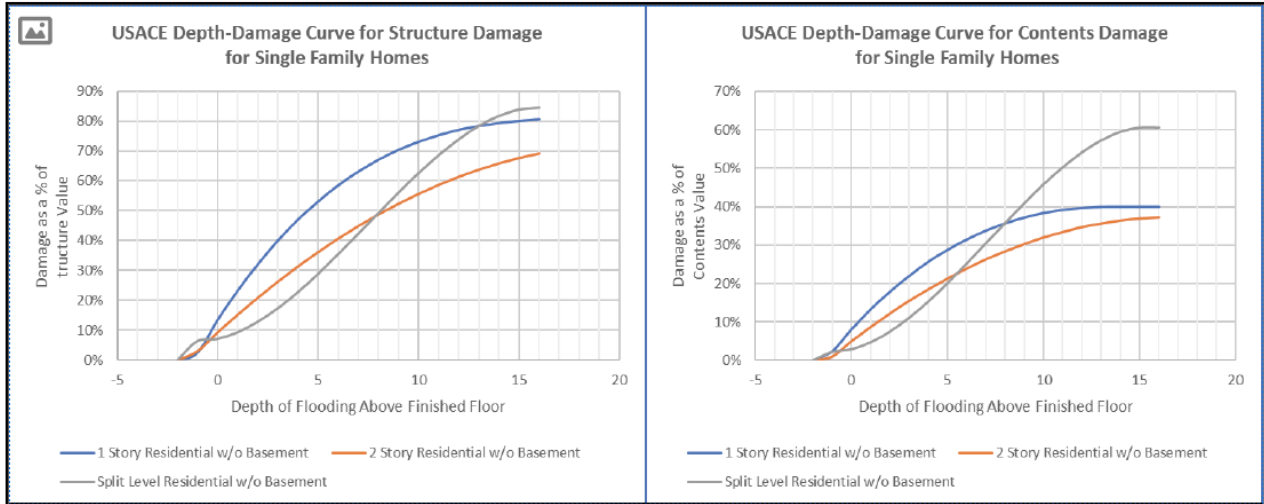
FIRM Zones		
Zone A	The 1% Annual Chance (100-year) or Base Floodplain. There are six types of A zones:	
	A	The base floodplain mapped by approximate methods, i.e., BFEs, are not determined. This is often called an unnumbered A zone or an approximate A zone.
	A1-30	These are known as numbered A zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
	AE	The base floodplain where base flood elevations are provided. AE zones are now used on new format FIRMs instead of A1-30 zones.
	AO	The base floodplain with sheet flow, ponding, or shallow flooding. Base flood depths (feet above ground) are provided.
	AH	Shallow flooding base floodplain. BFE's are provided.
	A99	Area to be protected from base flood by levees or Federal flood protection systems under construction. BFEs are not determined.
Zone V and VE	AR	The base floodplain that results from the de-certification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection.
	V	The coastal area subject to velocity hazard (wave action) where BFEs are not determined on the FIRM.
	VE	The coastal area subject to velocity hazard (wave action) where BFEs are provided on the FIRM.
Zone B, Zone X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and the 500-year floods. B zones are also used to designate base floodplains or lesser hazards, such as areas protected by levees from the 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than one square mile.	



FIRM Zones	
Zone C, Zone X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as exceeding the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood.
Zone D	Area of undetermined but possible flood hazards.

The USACE Depth-Damage Curves for Structures are appropriate to estimate the extent of damages based on the structural depth of inundation. Figure 3-14 below represents the generic depth-damage curves for single-family homes and contents used in the FEMA Benefit-Cost Analysis (BCA) software.

Figure 3-14 USACE Generic Depth-Damage Curves for Structure Damage (left) and Contents Damage (right)



Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

A query of the NCEI Storm Events Database for Flood and Flash Flood events between January 1, 2015, and December 31, 2024, returned 8 discrete flood events on 16 days in the City of Stillwater. Payne County has been included in 11 Presidential disaster declarations since 1953 as a result of flooding, with impacts from these events experience countywide, including the City of Stillwater.

Table 3-25 Noteworthy Flooding Events (NCEI and NWS Tulsa)

Date	Property Damage (\$USD)	Narrative
May 16-17, 2015	--	With an upper low traversing the region, a cold front stationed over the panhandles, and a developing dryline, storms developed out in the panhandles early on the 16th and made their way eastward across Oklahoma through the day. Toward evening, when the severe weather occurred, the front surged eastward with a line of storms forming along it. Several inches of water were reported over the road between North Park Drive and North Start Drive in Stillwater. No damage reported.



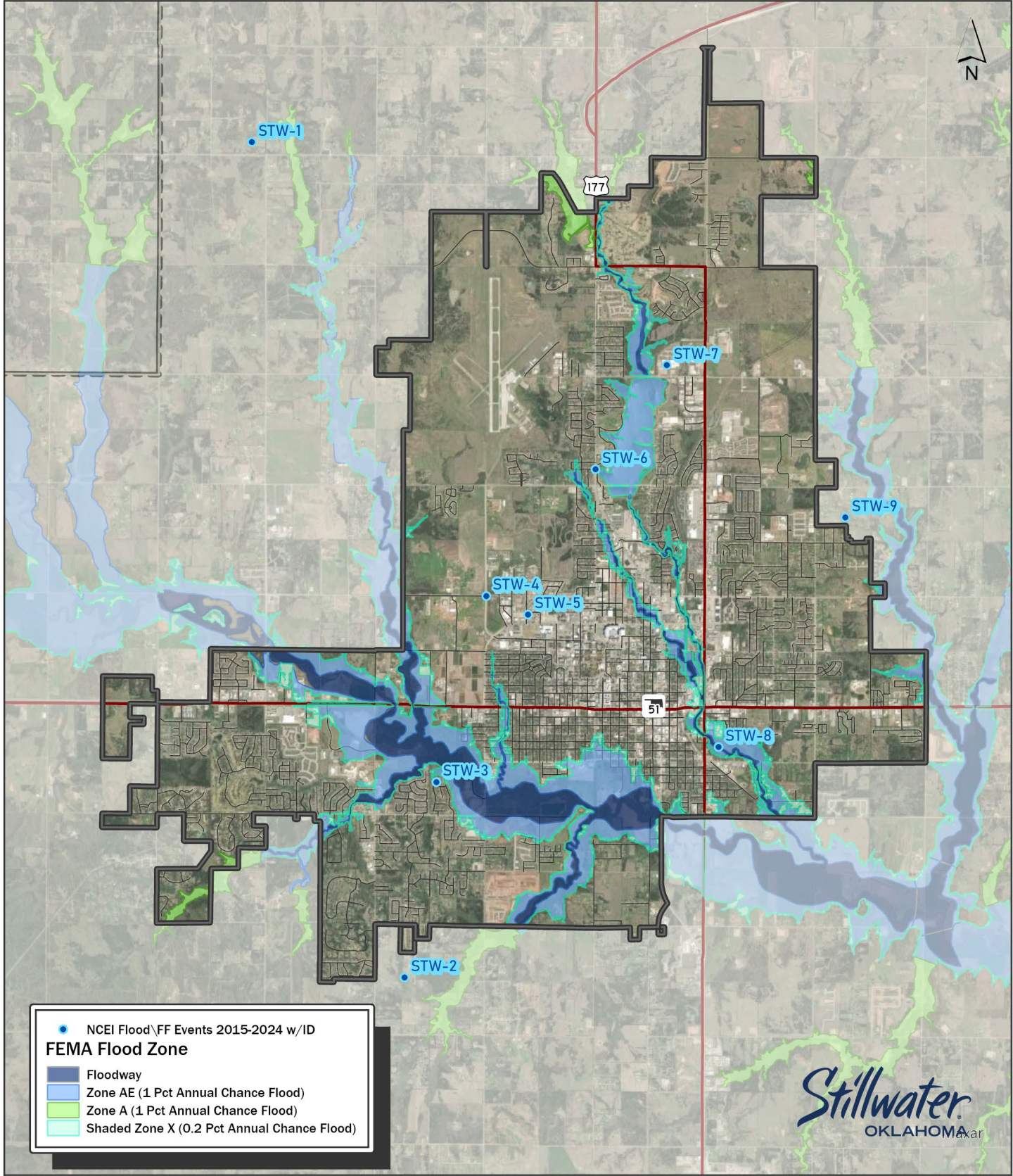
Date	Property Damage (\$USD)	Narrative
May 23, 2015	--	Storms developed in the panhandle on the 23 rd under the influence of an upper-level trough. These storms merged into a line and moved eastward over Oklahoma, producing widespread flooding. Floodwaters topped curbs along streets and were noted to be nearly a foot deep on some roads and yards north of Stillwater.
October 21, 2017	--	Storms formed along a cold front during the afternoon of the 21 st , eventually forming a line. Through the evening storms swept eastward through Oklahoma and western north Texas. Significant hail, severe winds, and a few short-lived tornadoes as well as some minor flooding were reported with these storms. Street flooding was reported in Stillwater with stalled vehicles.
August 16, 2018	--	Storms formed in the vicinity of a warm front on the afternoon of the 16 th across western Oklahoma and moved eastward. A car was swept off the road by floodwater in Stillwater, with 1 to 2 feet of water reported on the roadway.
May 20-25, 2019	\$10,000	A persistent, convectively active pattern, consisting of a deep trough over the western U.S. and ridging over the Southeast set the stage for a series of heavy rain events in the two weeks leading up to this flooding occurrence, saturating soils across much of north central and northeast Oklahoma. On the 20th, thunderstorms developed over northwest OK during the morning hours, with increasing development eastward. By mid-morning, convective rains had developed along and north of the I-44 Corridor. Meanwhile, a warm front lifted north throughout the day in response to a powerful upper-level low moving across the Four Corners region. By mid-afternoon, this front was located near a line extending from Drumright to Bixby to Inola, with scattered convection continuing to its north. This round of storms necessitated the closure of 32nd Avenue at Stillwater Creek due to water covering the road. Several home and vehicle rescues were also performed as a result of the flooding. By 7 am CDT on the 21st, Stillwater had received about 6.0 inches of rain from this round, on top of already saturated soils. An additional approximately 1.0 inch of rain added to these totals in Stillwater on the 22nd and 23rd. Another round of rainfall on the 24th and the subsequent overnight hours produced up to an additional 2.0 inches of rainfall in Stillwater, with yet another round of rain the following day producing another 1.5 inches by 7 am CDT on the 26th. At this point, the 10-day rainfall observed at the Oklahoma Mesonet station in Stillwater recorded about 12 inches of rainfall. This series of heavy rainfall events were part of a larger cluster that triggered the declaration of 4438-DR-OK for Payne County.



Date	Property Damage (\$USD)	Narrative
June 6, 2019	\$5,000	After the previous series of heavy rainfall events noted during May, additional rounds of intense rain continued in Stillwater into early June. By May 30, nearly 15 inches of rain had been observed in Stillwater from these events which began in May. On the 6th, widespread thunderstorms developed over north central Oklahoma, producing extensive flooding. In Stillwater, moving water was reported to have covered a roadway southwest of the City. This event was part of a larger cluster of heavy rainfall and flooding, including the previous discrete instance over several days in May, that triggered the declaration of 4438-DR-OK for Payne County.
August 13-14, 2023	\$5,000	Scattered high-based convection moved from the Texas Panhandle into portions of western Oklahoma during the afternoon of the 13th. Sufficient wind shear and instability combined to yield a mix of semi-organized cells and clusters across the region, resulting in a few reports of large hail with initial activity. By the evening, convection organized into a mesoscale convective system (MCS) and moved across portions of north-central Oklahoma. Multiple severe wind gusts were reported as this line swept through the aforementioned areas. Report of flooded roadways in northern portions of the community of Stillwater. Vehicles reported stranded with water up to their bumpers.
May 6-7, 2024	--	On the evening of the 6th through the early morning hours of the 7th, the synoptic pattern across the western half of the Continental United States favored a significant severe weather episode across the region, with a powerful (110-120 knot) upper-level jet streak ejecting across the Central Plains during the evening of the 6th. In concert with robust kinematics in place, extreme instability (pockets of >4000-5000 J/kg of CAPE) promoted an environment favorable for significant severe weather. This setup produced strong and severe thunderstorms during the afternoon hours, many of which merged into clusters during the evening and overnight hours. In addition to flooding, tornadoes, strong winds, and large hail were also reported throughout the state. In Stillwater, roadway flooding along portions of Lakeview Road were reported.



Figure 3-15 Locations of Reported Flooding/Flash Flooding between 2014 to 2023 (NCEI)





Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and eight previous occurrences of flooding in the City of Stillwater found in the NCEI database across the 10-year period between January 1, 2015, and December 31, 2024, the probability of flooding is rated as **Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-26 Vulnerability and Impact to Flood in the City of Stillwater

Vulnerability	Impact
Flooding was reported to have inhibited access to Sangre Ridge Elementary School and Stillwater Middle School during the May 2019 flooding event that is well-known in this area. Both schools were reported to have been closed for 2 weeks due to this issue.	Transitioning to alternate methods of classroom instruction during periods when in-person classes must be cancelled have proven to have adverse effects on the retention of material by students, as a whole. Additionally, internet service, having an environment conducive to learning, and receiving critical services provided by the school, such as meals, are three considerations that affect students living in poverty, placing them at a further disadvantage.
Stillwater contends with flooding perennially. As development in Stillwater continues to increase in response to the City’s continued population growth, stormwater runoff producing flooding can create problems for homes, businesses, and transportation routes across the planning area.	Not only does this consideration underscore the impact of development on increased potential for flooding, but it also provides an opportunity for the City to educate and encourage its residents on the benefits of NFIP-sponsored flood insurance, and the discount available to them by virtue of the City’s participation in the CRS program.
Damage or destruction to businesses from flooding in the City of Stillwater can disrupt the local economy.	Three primary economic impacts result from flooding: 1) Costs to owners of those businesses to repair/rebuild; 2) Loss of pay to employees and workers of those businesses during the repair/rebuild period; 3) If the affected businesses provide goods and services critical to the community, such as grocery stores, gas stations, pharmacies, etc., cascading risks to the mobility and the health and well-being of residents result.



Vulnerability	Impact
Inundated transportation routes following heavy rainfall events inhibit access for first responders and other motorists. Further, motorists who lack the judgment to avoid driving into overtopped roadways put their lives and well-being at risk and may cause increased strain on first responders if a high water rescue becomes necessary when they end up stranded.	Public education and awareness strategies that are targeted to the public overall, as well as demographic sectors who may show an outsized need for rescue response relative to other sectors, can be a very effective tool to protect Stillwater residents and first responders from the risks associated with flooding.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Heavy rainfall and flooding have always been part of Oklahoma's climate. Annual precipitation has increased over the vast majority of Oklahoma, with the highest change occurring in winter. According to Easterling et al. (2017), heavy rainfall (top 1% of annual events) increased by 12% between 1958 and 2016. Seasonally, rainfall is projected to increase in winter and spring and decrease in summer and fall by the end of the 21st century, but projected changes are small compared to natural variations. There is strong confidence that there will continue to be an increase in the frequency and intensity of heavy rainfall events over the 21st century (Easterling et al. 2017), which increases the chance of flooding. However, flooding is a locally complex phenomenon and can be exacerbated by human action (or inaction) as much as it can be caused by atmospheric conditions.

Land Use Development

In order to assess flood risk to existing structures, a GIS-based analysis was used to estimate exposure to flood events using local tax assessor records in combination with building footprint data from the City of Stillwater. The determination of assessed value at-risk (exposure) was calculated using GIS analysis by summing the improved values for parcels and structures that were confirmed to be located within an identified floodplain. Building footprint data allows for a significantly more accurate estimate of the structures inside the SFHA. In Stillwater, 341 structures are touched by the SFHA. Of these structures, 56 are located in the floodway. It is estimated that the average structure will experience 2 feet of flooding, which will result in 25% damage to the structure and 25% damage to contents.

Data on structures in identified areas of flood risk, categorized by their location in each FEMA floodplain are outlined in Table 3-27, while Table 3-28 contains data on NFIP claims in the City. Stillwater's strong commitment to maintaining current flood plain zoning guidelines in mind, it is not anticipated that any new critical facility development will occur within flood-prone areas of the jurisdiction. As development in new areas and revitalization of existing ones continue, locations and building techniques must be closely examined. Substantial improvements or repairs to critical facilities in the 100-year floodplain will be evaluated to ensure the prescribed improvements will help mitigate potential damage from a future flood event. Plans development or in process for implementation for street and/or roadway improvements within the jurisdiction should consider mitigation measures to reduce flooding of these roads and intersections and should consider the effects of existing and future levels of urbanization.



Table 3-27 Number of Structures in Stillwater in Identified Areas of Flood Risk (FEMA Floodplain)

Jurisdiction	Floodway	Zone AE	Zone A	Zone X	TOTAL
		1% Floodplain	1% Floodplain	0.2% Floodplain	
City of Stillwater	56	341	4	254	599

Table 3-28 NFIP Claims in Stillwater

Jurisdiction	RL Properties*	RL Claims	NFIP Total \$ RL Paid	NFIP Claim Locations	NFIP Total \$ Claims Paid
City of Stillwater	3	9	\$125,456.02	82	\$892,777.00

Population Patterns

As Stillwater's population continues to grow, so does the importance of ensuring all residents, new and existing, are protected from the risks associated with flooding.

Existing streets identified as problem areas for recurring flooding which pose a hazard to existing and future residents include 3rd St. and Maple Ave. from West Boomer Creek by 2 feet, the Miller Ave. and Lowry St. intersection and the Hall of Fame Ave. and Main St. intersection (Problem Areas 2 and 3), both by more than 3 feet, also from West Boomer Creek. Duck St. from McElroy Ave south to nearly Scott St. (Problem Area 3) is inundated in areas by as much as 4 feet. All of the street crossings and adjacent streets from Eskridge Ave. (Problem Area 4) upstream to Washington St. are inundated by as much as 4 feet. Dell St. in Problem Area 5 overtops based on NFIP data in this area that is not a FEMA mapped Zone A.

Areas from Admiral Road south to 3rd St. with each roadway culvert overtopping by approximately one foot are affected by the Duck Creek floodplain. Additional areas in this floodplain extend from 3rd St. south to 6th St., where the floodplain widens, and S. Ridge Dr. is inundated by as much as two feet with all culvert overtopped by that amount. While the 6th St. culvert does not appear to overtop, Willis St. and most of the lots on either side are flooded between 6th St. and 9th St. The culverts at 9th St. and 12th St., as well as a private driveway at 1104 S. Willis St. overtop. Willis St. is inundated by 1-2 feet from approximately 10th St. to 12th St. Between 6th St. and 12th St the population is 22% to 26% of people ages 65 or older.

12th St. is overtopped by 1 to 2 feet from Stillwater Creek backwater. The upstream areas that flood at 12th St. contain a population of 22% to 26% of people ages 65 or older.

An additional consideration for the effects of flooding on population, current and future, are those residents in areas who are less likely to possess the means to afford the cost of recovery. Such residents may also have a more difficult time evacuating.



3.4.7. Hail

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Hail is defined by the NOAA National Weather Service as showery precipitation in the form of irregular pellets or balls of ice more than 5 mm, or 0.2 inches, in diameter, falling from a cumulonimbus cloud.²⁶

Hail forms as rain falls through a cumulonimbus or thunderstorm, cloud encounters an updraft within the storm and accretes more moisture and refreezes. This process can repeat several times, which increases the size of hail, until its weight becomes too heavy for updrafts to lift it, at which point it falls to the surface.

Hail which reaches a threshold of 1.00 inch in diameter can cause the thunderstorm which produced it to be categorized as severe. Hail of this size is categorized as large hail and can produce damage to crops, vehicles, and roofs, and can injure plant life, animals, and humans. Thunderstorms which produce hail above this threshold are considered to be severe by the National Weather Service.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Since hail is a byproduct of thunderstorms, and the risk of thunderstorms is considered to be uniform across the City of Stillwater, location is considered to be uniform across the planning area.

A graphical depiction of hail reports across the planning area between 2015 and 2024 are depicted in Figure 3-16.

NOAA data referencing the number of days with hail exceeding 1 inch in diameter across the United States is depicted in Figure 3-17. In this figure, it can be seen that the planning area can be expected to experience 5 or more events with hail 1.00 inch or larger each year.

²⁶ <https://forecast.weather.gov/glossary.php?letter=h>



Figure 3-16 Hail Reports (1.00 inch diameter or greater) Across Stillwater (NWS and NCEI)

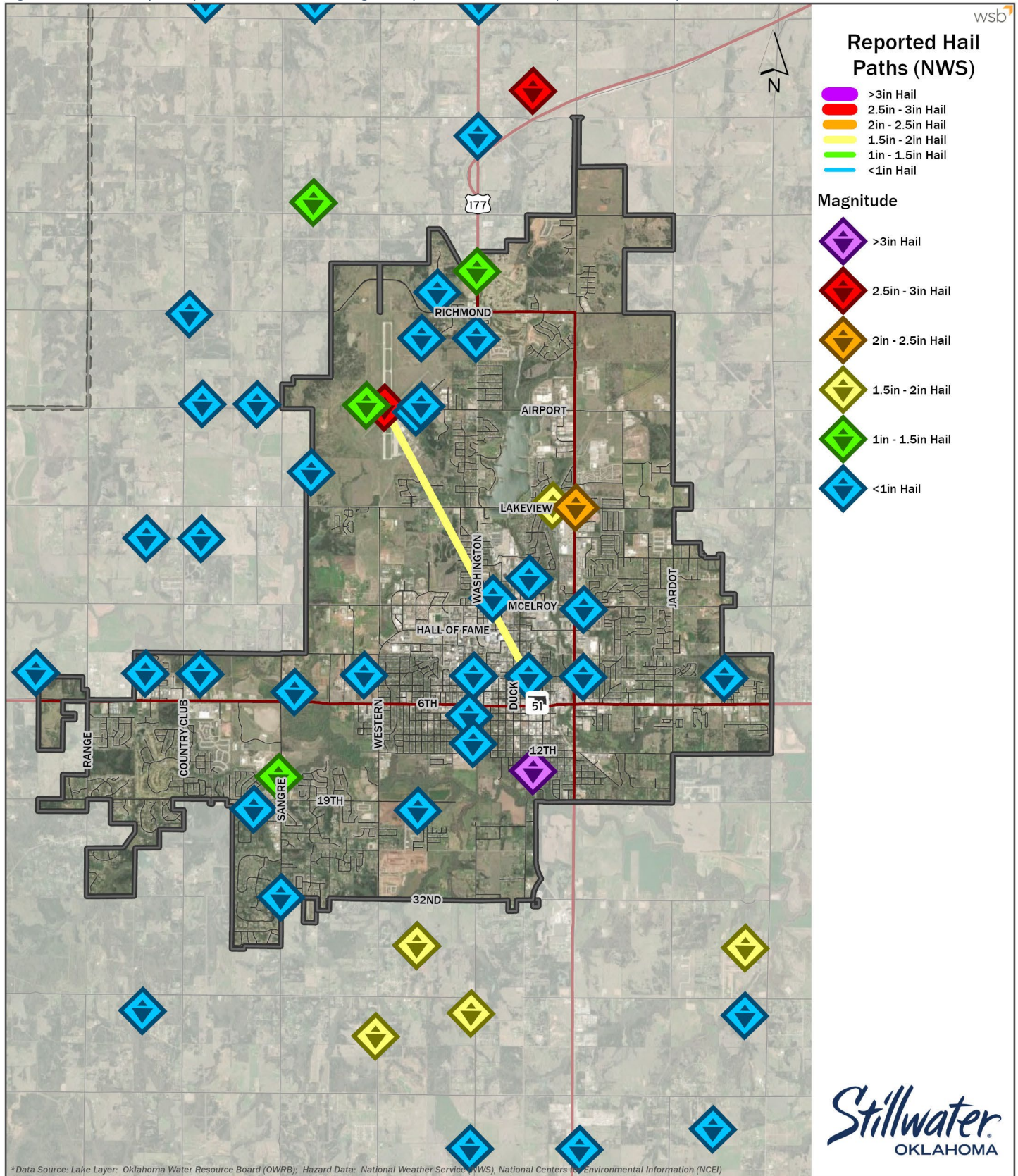
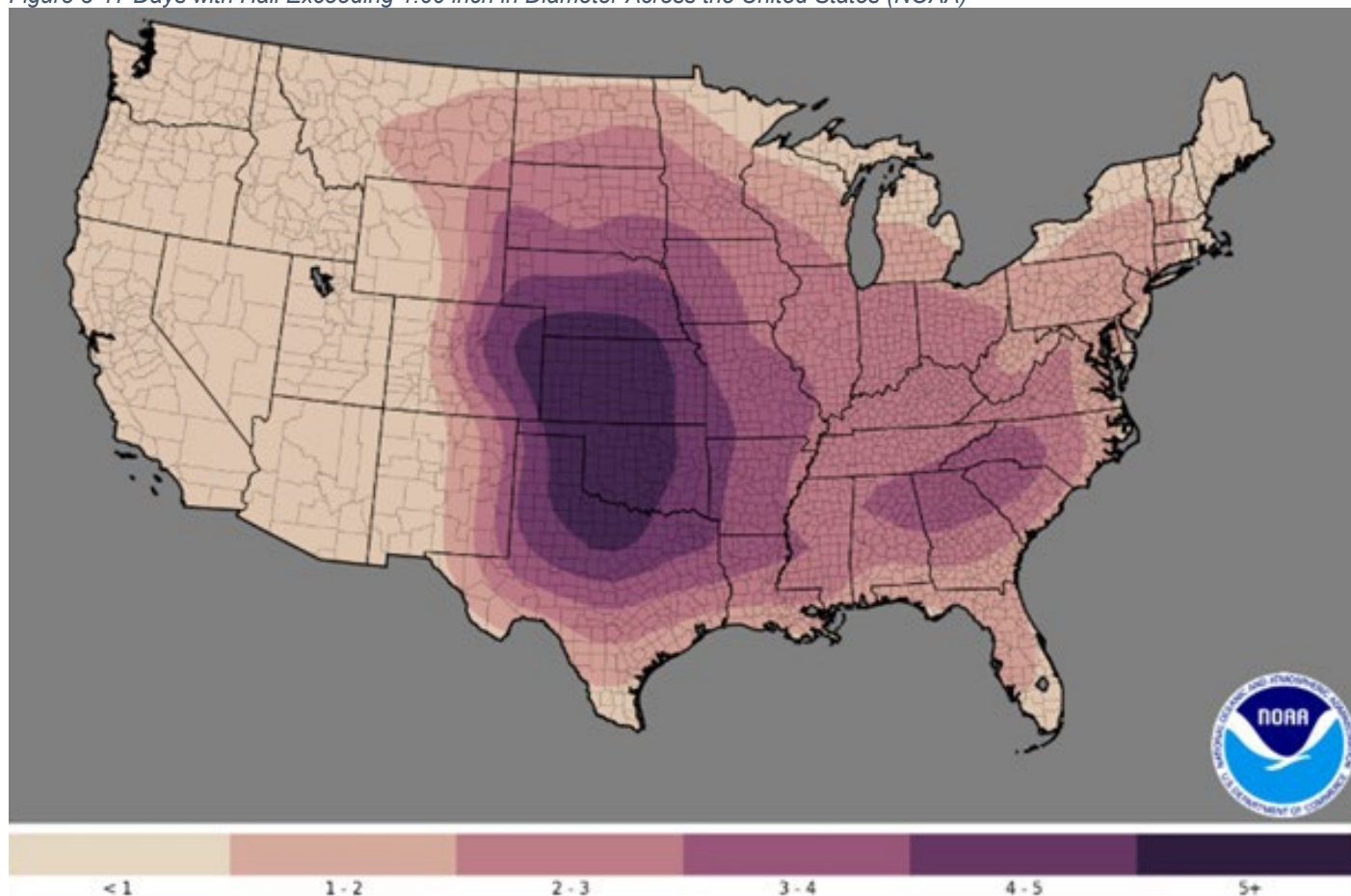




Figure 3-17 Days with Hail Exceeding 1.00 inch in Diameter Across the United States (NOAA)



Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

Damage resulting from a hail event is primarily a function of the diameter of hail, with the severity of damage directly correlated to the size and density of hail. Damage can take the form of numerous broken windows and damaged siding, can cause serious damage to cars, roofs, and walls, and inflict serious bodily injury.

As shown in the Combined NOAA/TORRO Hailstorm Intensity Scale in Table 3-29, and in accord with NWS criteria for severe thunderstorms, hail begins to be considered severe when it reaches an inch in diameter or larger. Hail begins to be characterized as destructive when it reaches 1.6 inches in diameter, or approximately the size of a golf ball.²⁷ **Although hail size for most events is concentrated within the H0 – H5 categories, based on previous events, the planning area can experience any of the hail sizes listed on the combined NOAA/TORRO Hail Intensity Scale, up to H10.**

²⁷ <https://www.torro.org.uk/research/hail/hscale>



Table 3-29 Combined NOAA/TORRO Hail Intensity Scale

Size Code	Intensity	Diameter (in.)	Approximate Size	Typical Damage Impacts
H0	Hard Hail	Up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33 – 0.60	Small marble or mothball	Slight damage to plants, crops
H2	Potentially Damaging	0.60 – 0.80	Dime or grape	Significant damage to fruit, crops, vegetation
H3	Severe	0.80 – 1.20	Nickel to Quarter	Severe damage to fruit & crops, damage to glass & plastic structures, paint & wood scored
H4	Severe	1.20 – 1.60	Half Dollar to Ping-Pong Ball	Widespread glass damage, vehicle bodywork damage
H5	Destructive	1.60 – 2.0	Silver Dollar to Golf Ball	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	2.0 – 2.4	Lime or Egg	Aircraft bodywork dented; brick walls pitted
H7	Destructive	2.4 – 3.0	Tennis Ball	Severe roof damage, risk of serious injuries
H8	Destructive	3.0 – 3.5	Baseball	Severe damage to aircraft bodywork
H9	Super Hailstorms	3.5 – 4.0	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	> 4.0	Softball & up	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

NCEI records show 13 discrete hail events of 1.00 inches or larger reported in Stillwater between January 1, 2015 and December 31, 2024. Instances of notable hail events that have affected the planning area during this timeframe are listed in Table 3-30.

Table 3-30 Noteworthy Hail Events in Stillwater (NCEI)

Date	Size (inches)	Narrative
March 25, 2015	2.00	A strong upper level storm system moved across the Southern Plains during the late afternoon and evening. At the surface, a slow moving cold front and dryline served as foci for severe thunderstorm development. With strong instability and wind shear, very large hail and damaging winds were widespread, including hail measuring 2.00 inches in diameter reported in Stillwater.



Date	Size (inches)	Narrative
April 1, 2015	1.00	A complex of severe storms continued into the early morning hours of the 1st, bleeding over from earlier activity on the 31st. Large hail was reported north of Stillwater Regional Airport.
August 22, 2015	1.00	A shortwave trough over the area induced the development of thunderstorms, which produced flooding and large hail in north central Oklahoma, including Stillwater.
May 13, 2019	1.00	A weak frontal boundary combined with sufficient atmospheric instability led to the development of scattered thunderstorms, including one that produced large hail west of Stillwater Regional Airport. This event was part of a larger, extended outbreak spanning several weeks, which prompted the declaration of 4438-DR-OK.
May 20, 2019	1.75	An extremely unstable atmospheric environment led to the development of widespread severe thunderstorms across Texas and Oklahoma which produced large hail that was reported south of Lake Carl Blackwell Dam. This event was part of a larger, extended outbreak spanning several weeks, which prompted the declaration of 4438-DR-OK.
May 22, 2019	1.00	Unstable atmospheric conditions led to the development of thunderstorms producing large hail and tornadoes across parts of Texas and Oklahoma, including northwest of Stillwater Regional Airport. This event was part of a larger, extended outbreak spanning several weeks, which prompted the declaration of 4438-DR-OK.
May 28, 2019	1.00	Large hail and strong winds in association with thunderstorms ahead of a dryline were reported south of Stillwater. This event was part of a larger, extended outbreak spanning several weeks, which prompted the declaration of 4438-DR-OK.
April 28, 2020	1.00	Numerous severe thunderstorms formed along a cold front in northern Oklahoma and swept southward across the state. Hail, some very large and observed near Stillwater, was reported with many of these storms, along with a few severe wind gusts.
April 29, 2022	1.25	A line of thunderstorms developed along a cold front in north central Oklahoma during the late evening hours, producing several reports of large hail in and near Stillwater.
May 5, 2022	1.75	An upper low moving across Oklahoma helped spark thunderstorms during the morning and early afternoon of the 5th, with several reports of hail received across central Oklahoma.
June 6, 2023	1.50	Numerous ordinary-type thunderstorms developed across Oklahoma during the early afternoon hours. A few of these became severe over north central Oklahoma, producing large hail in locations near Stillwater.



Date	Size (inches)	Narrative
September 19, 2023	1.00	As multiple low-amplitude upper waves (embedded within broad zonal flow) traversed the Southern Plains on the 19 th , convection occurred across north-central Oklahoma, including a few reports of marginally severe hail in Stillwater.
August 15, 2024	1.00	A cold front pushed into portions of western and central Oklahoma during the afternoon and evening of the 15 th . Multiple areas of convective activity emerged near and ahead of this feature, coincident with strong surface heating. Marginal deep-layer wind shear promoted generally disorganized (multi-cell) storm modes. In addition to wind damage (downburst) events, a few reports of large hail were also received, including near Stillwater.

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and thirteen occurrences of hail measuring 1.00” in diameter or larger found in the NCEI database between January 1, 2015, and December 31, 2024, in the City of Stillwater, the probability of this hazard has been rated as **Highly Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-31 Vulnerability and Impact to Hail in the City of Stillwater

Vulnerability	Impact
Many residents in the City of Stillwater lack proper methods to receive warning notifications.	Inability to receive timely and accurate information on imminent hazard threats, or rely primarily on outdoor warning sirens and devices, may expose residents unaware of an imminent hail threat to this hazard.



Vulnerability	Impact
Costly damage to structures and vehicles often results from large hail produced by severe thunderstorms.	Vehicles stored in exposed areas without adequate shelter, including those owned and maintained by the City of Stillwater, are at risk of being damaged during a large hail event. Structures with roofing and windows not rated to withstand hail sizes common in Oklahoma are at risk of needing repair after each occurrence of large hail. Such repairs may pose a burden, or may be impossible, to the socioeconomically vulnerable. Thus, it is important to encourage builders and contractors to use disaster resistant materials and construction methods when possible.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Hail is commonly associated with severe thunderstorms. Climate models project an increase in the frequency and intensity of severe thunderstorms, and events with large hail are projected to increase (Kossin et al. 2017). At the same time, models project an overall decrease in the number of days with hail per year (Brimelow et al. 2017). Confidence in the projections is currently low, however, due to the isolated and sporadic nature of hail events and limited comprehensive datasets which make it difficult to track long-term trends (Wuebbles et al. 2017a).

Land Use Development

Hail can cause damage to windows and roofs of existing and future structures in Stillwater. Hail may cause bruises, punctures, and leaks to roofing, with the amount of damage dependent upon the size of the hail and the age, material, and surface temperature of the roof at the time of the hail event. When the thunderstorms producing the hail is accompanied by high winds, those winds can carry the hail in a more horizontal fashion, which can break through windows, doors, and skylights that are not impact resistant. City buildings, and all critical facilities, are at risk.

New and future development will experience continued vulnerability to hail. Disaster resistant construction techniques and materials exist that may reduce the impact of large hail and can be considered an investment in reducing the risk of such development to damage from large hail.

Population Patterns

Changes in Stillwater's population translate to changes in the level of risk to hail. Such effects resulting from a hail event on its residents include injury and financial burden. Repair costs incurred by hail damage to vehicles and homes may be too burdensome for low income sectors of the population.



3.4.8. Lightning

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Lightning is a visible discharge of electrical energy that results from the buildup of positive and negative charges in a thunderstorm. While such a discharge may occur within or between clouds, between the cloud and the air, between a cloud and the ground, or between the ground and a cloud, the latter two types of lightning are the two which pose a risk to the planning area and will be discussed in this section.

While lightning typically strikes within three miles of its point of contact in the thunderstorm cloud, it is common for lightning to strike 10 to 15 miles from that point. In fact, lightning in Oklahoma has been observed to strike as far away as 200 miles!²⁸

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Since lightning is a byproduct of thunderstorms, and the risk of thunderstorms across the planning area is considered to be uniform, the risk of damaging lightning in the City of Stillwater is therefore considered to be uniform.

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

NOAA and the U.S. Wildfire Service have developed a metric denoted as the Lightning Activity Level (LAL) to assess the damage potential resulting from lightning, based on lightning activity. This scale is broken into six different categories, ranging from LAL 1 to LAL 6. A breakdown of this scale is depicted in Table 3-32 below.

Lightning's extent across the planning area can range between LAL 1 to LAL 6.

Table 3-32 Lightning Activity Level (LAL)

LAL Value	Description
LAL 1	No Thunderstorms
LAL 2	Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud to ground strikes in a five-minute period.
LAL 3	Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud-to-ground strikes in a 5-minute period.
LAL 4	Scattered thunderstorms. Moderate rain is commonly produced. Lightning is frequent, 11 to 15 cloud-to-ground strikes in a 5-minute period.
LAL 5	Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud-to-ground strikes in a 5-minute period.

²⁸ <https://ktul.com/news/local/longest-lightning-bolt-ever-recorded-in-oklahoma>



LAL Value	Description
LAL 6	Dry lightning (same as LAL 3 but without rain). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with a Red Flag Warning.

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Since NCEI only records lightning data that results in fatality, injury, and/or property or crop damage, reports in their database of this hazard are limited and can be considered sparse and incomprehensive. Vaisala does, however, operate a robust lightning observation network called the National Lightning Detection Network (NLDN), the data from which is released annually in a report they produce. County-level observed cloud-to-ground lightning density per square kilometer across Oklahoma, with Payne County outlined for reference, are depicted in Figure 3-18 and Figure 3-19. In these figures, 6 to 8 cloud-to-ground lightning strikes per square kilometer per year were observed between 2016 and 2023, while 4 to 5 were observed in 2024. Assuming a uniform distribution of lightning strikes across the County and considering the City has a surface area of 76.4 km², **these numbers translate to a total number of cloud-to-ground lightning strikes between 3,973 and 5,272 across the planning area between January 1, 2016, and December 31, 2024.**

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and a calculated estimate of between 3,973 and 5,272 cloud-to-ground lightning strikes occurring across the planning area annually between January 1, 2015 and December 31, 2024, the probability of occurrence of this hazard has been rated as **Highly Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled "Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns."



Figure 3-18 Cloud-to-Ground Lightning Density 2016-2023 in Oklahoma (Vaisala)

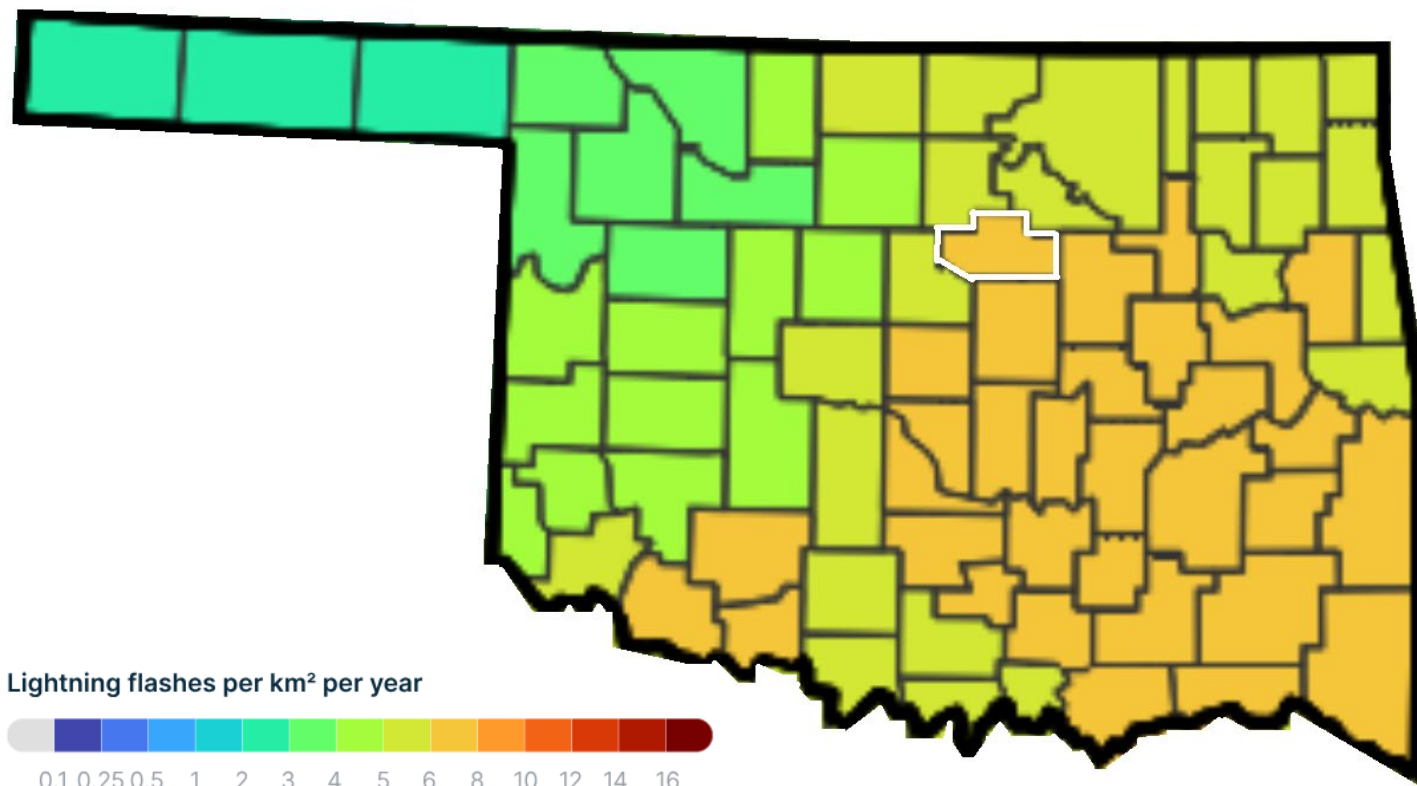
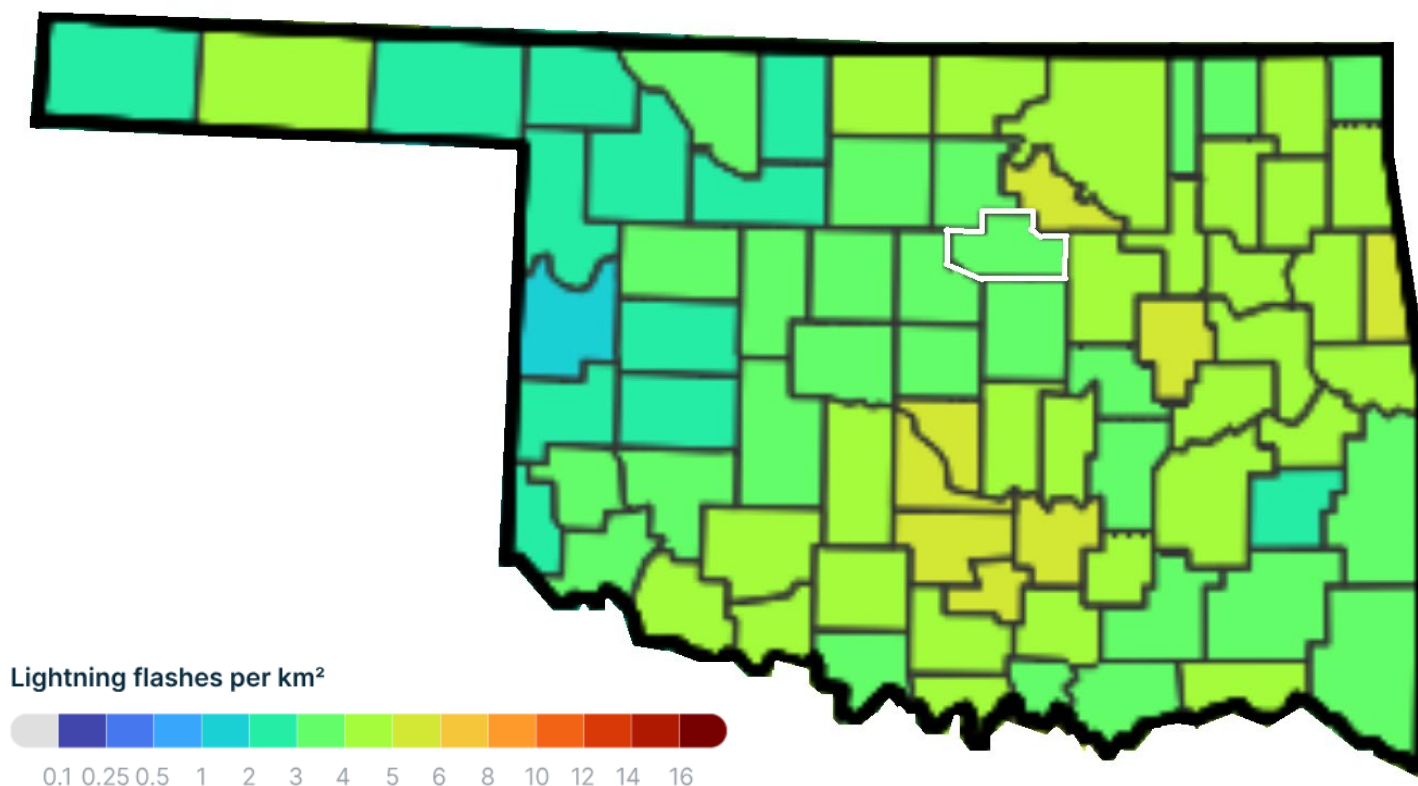


Figure 3-19 Cloud-to-Ground Lightning Density 2024 in Oklahoma (Vaisala)





Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-33 Vulnerability and Impact to Lightning in the City of Stillwater

Vulnerability	Impact
Hosting several park spaces and golf courses, as well as outdoor events associated with Oklahoma State University, those who may be outdoors when thunderstorms are imminent are at risk if appropriate actions to shelter are not taken.	Thunderstorms, regardless of their severity, pose a risk to the health, and potentially their lives, of people and who are not adequately sheltered.
Power outages caused by lightning can disrupt business, government operations, and school instruction, and put vulnerable populations at an enhanced risk.	A variety of impacts, ranging from isolated to citywide, can result from a lightning strike and affect Stillwater residents. On the upper-end of this range of extent, residents in vulnerable sectors of the population who rely on schools and critical facilities without backup power generating capabilities experience enhanced risk to their health and well-being until repairs are completed to electrical delivery infrastructure to restore service. Additionally, interruption to business operations can have a negative impact on the local economy if damage is sustained as a result of lightning strike. Not only must business owners bear the cost of a repair/rebuild, workers at affected businesses must endure the potential for loss of pay.
Lightning strikes can ignite fires and cause damage and destruction to the built environment.	Lightning strikes are commonly known to start structural fires and wildfires. Damage and destruction to the built environment resulting from these blazes can leave residents in the City of Stillwater at risk. Those in both segments who are at an enhanced level of risk are vulnerable and disadvantaged populations who rely more heavily on the Community Lifelines services they provide. Additionally, those who own property damaged or destroyed by fire and are also socioeconomically disadvantaged experience outsized adversity in repairing and/or rebuilding, particularly if their property is in a FEMA floodplain.



Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Lightning is associated with thunderstorms, so as more favorable environments for thunderstorms are expected across the United States, increases in lightning are also projected. Studies have shown an increase in lightning associated with severe storms (Schultz et al. 2011). Climate models project an increase in the frequency and intensity of severe thunderstorms (Kossin et al. 2017), therefore, lightning occurrences are likely to increase. Confidence in the projections is currently low, however, due to the isolated and sporadic nature of lightning events and limited comprehensive datasets which make it difficult to track long-term trends (Wuebbles et al. 2017a).

Land Use Development

All existing structures within the City of Stillwater share the same vulnerabilities to lightning. From power outages to the potential from damage or destruction from fires ignited by lightning strikes, it is important to acknowledge these risks and for future development to be regulated to enhance the City's resilience to them. Further, existing city buildings, as well as all other critical facilities, can be strengthened by the integration of lightning protection solutions as well as ensuring backup rollover electrical generators are obtained and properly maintained to ensure the continuity of services provided as FEMA Community Lifelines.

Population Patterns

As Stillwater's population continues to grow, so does the risk for its residents to be exposed to lightning. As discussed in the Climatological Changes section, projections for more frequent and intense severe thunderstorms in Stillwater suggest an increased risk of lightning impacts on residents in the planning area. Future lightning risk, both generally and specifically for the population, is expected to rise over time.

3.4.9. High Wind

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

High wind is defined by the National Weather Service as sustained wind speeds of 40 mph or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration.²⁹

A severe thunderstorm is one that produces winds of at least 58 mph or greater for any duration and is the most common mechanism for the development of high winds which affects the planning area. Straight-line winds, which are produced by severe thunderstorms, typically accompany a squall line of thunderstorms. As this line develops a "bow" signature on radar, this signals the likelihood of straight-line winds that often exceed 75 mph, and can exceed over 100 mph.

Sustained winds of 40 mph or greater can develop in certain scenarios where an intense low-pressure system produces a tight pressure gradient which results in winds at or above this threshold for several hours. While this phenomenon occurs more frequently over western Oklahoma and the High Plains east of the Rockies, such atmospheric setups can affect the planning area, most commonly during the spring.

²⁹ <https://forecast.weather.gov/glossary.php?letter=h>



Distinction Between High Winds and Tornadoes

While differences in the specific impacts are outlined in profiles for each hazard, and such impacts vary, the primary difference between high winds and tornadoes lies in tornadoes producing concentrated, localized patterns of damage, while high winds produce damage and effects across an area on a much larger scale. Additionally, the magnitude of tornadic winds can be much stronger than instances of high wind. Finally, the rotational nature of winds associated with a tornado can exacerbate damage due to shearing forces on surfaces exposed to the wind, whereas high wind refers to winds that blow in a more linear fashion, as far as the scope of a local hazard mitigation plan is concerned.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Mechanisms that produce high winds mostly affect areas on a scale from county level and larger. High winds which result from thunderstorms typically develop in association with linear squall lines, which often extend across multiple counties, and sometimes even multiple states. **Thus, high winds pose a uniform risk to the entire extent of the City of Stillwater.** Locations of high wind reports across the planning area are depicted in Figure 3-20.

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

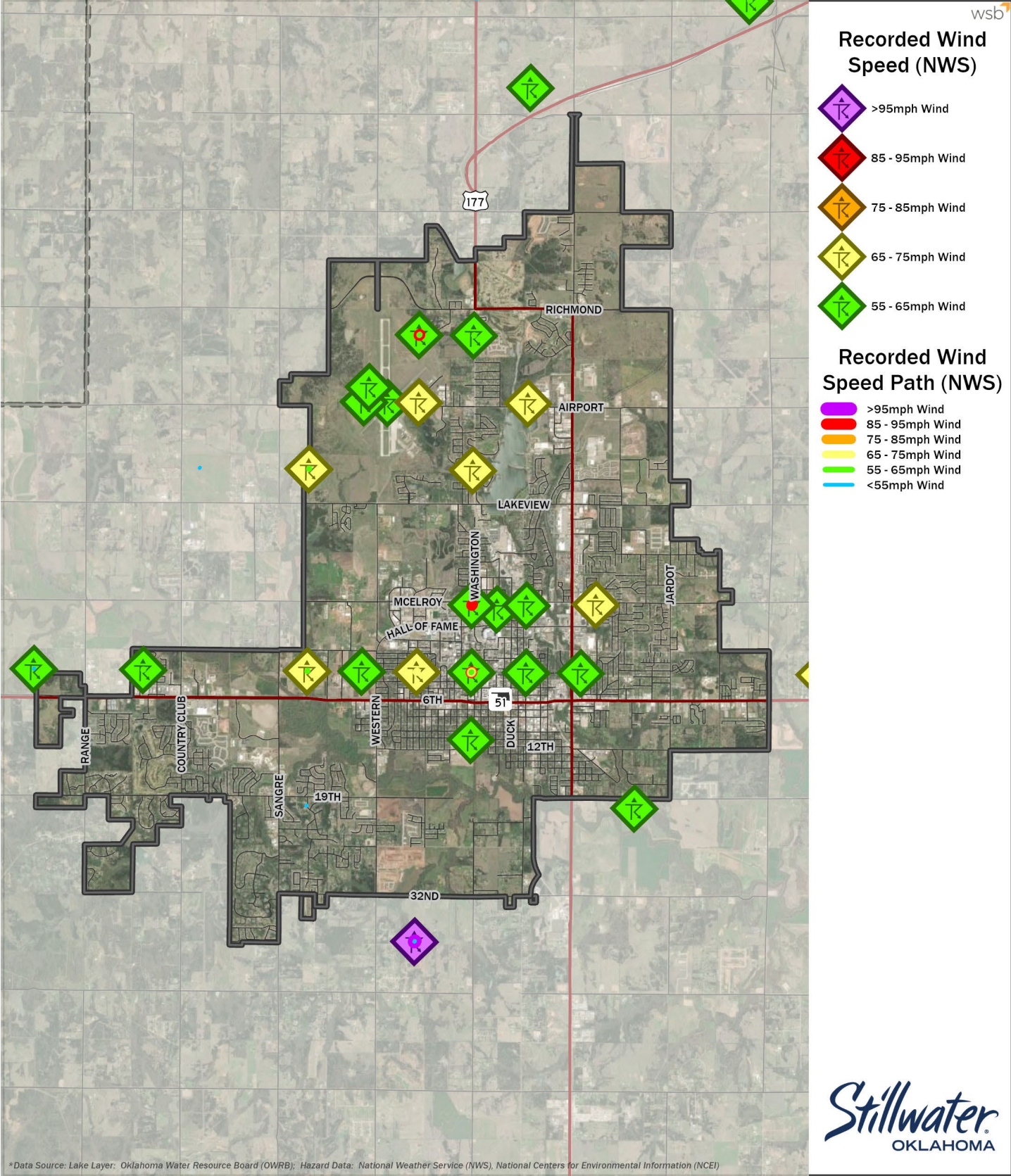
Assessment of the extent of high winds in the planning area is accomplished through use of the Beaufort Wind Scale, which has been depicted in Table 3-34. **Stillwater can expect to experience the full range of wind speeds on this scale, which ranges between 0 and 12.**

Table 3-34 Beaufort Wind Scale (NWS)

Beaufort Number	Wind Speed (mph)	Beaufort Number	Wind Speed (mph)	Beaufort Number	Wind Speed (mph)
0	< 1	5	18 – 23	9	47 – 54
1	1 – 3	6	24 – 30	10	55 – 63
2	5 – 7	7	31 – 38	11	64 – 72
3	8 – 12	8	39 – 46	12	> 73
4	13 – 17				



Figure 3-20 High Wind Reports (greater than 58 mph) across the planning area (NWS and NCEI)





Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Due to the various weather phenomena that affect the planning area, high wind events are common. **27 events which produced \$108,000 in damages in the City of Stillwater from January 1, 2015, to December 31, 2024, are on record in the NCEI Storm Events Database.** Notable high wind events among these during this period are outlined in Table 3-35.

Table 3-35 Noteworthy High Wind Events in the planning area (NCEI)

Date	Wind Speed (mph)	Damage (USD)	Narrative
July 2, 2015	64	--	Severe storms formed along a stalled front across central Oklahoma as a shortwave made its way over the area the evening of the 2nd. These storms produced heavy rains and strong winds. Tree limbs of two to four inches were downed along Highway 108 near Ripley.
August 22, 2015	70	\$2,000	As a shortwave moved through the area, storms formed in southwest Kansas and slowly made their way into northern Oklahoma during the evening of the 21st. Overnight into the morning of the 22nd, storms slowed down and redeveloped over north central Oklahoma, resulting in high winds and some flooding. Large trees in Stillwater were snapped by winds produced by these thunderstorms.
September 11, 2015	70	\$11,000	As an upper level trough moved through the region, a cold front swept into northern Oklahoma just after midnight on the 11th, bringing with it a line of thunderstorms. The line quickly fell apart, but not before a few of the storms produced severe winds in north central Oklahoma. Several tree limbs and whole trees blew down, with some of the limbs going through roofs, including a 4-inch tree limb blown down onto a patio roof.
May 24, 2016	70	\$65,000	During the afternoon of the 24th, a few strong storms formed along an outflow boundary in north central Oklahoma. Later that evening and overnight into the 25th, despite a strong cap, storms formed across when a 700mb wave moved through central Oklahoma enhanced by the low level jet. These storms produced strong winds which destroyed a mobile home and blocked Lone Chimney road. Also, power lines were reported down on Perkins and Lone Chimney Roads.
July 13, 2016	75	--	An area of storms formed along a boundary in southern Kansas on the evening of the 13th and moved southward. As they did, strong winds were observed at Stillwater Regional Airport.



Date	Wind Speed (mph)	Damage (USD)	Narrative
August 25, 2016	58	--	Scattered to numerous storms formed on and near a southeastward moving cold front on the evening of the 25th, with severe winds being the primary impact. Unspecified damage reported as well as some trees down and power outage in Ripley.
May 11, 2017	78	--	Storms formed during the afternoon of the 11th in the vicinity of an eastward moving cold front and dryline. 78 mph winds were observed near Lake Carl Blackwell Dam.
July 2, 2017	64	--	Showers and storms developed during the afternoon and evening of the 2nd along and behind a northward moving warm front. A 12-inch diameter tree was downed by strong winds.
May 2, 2018	70	\$20,000	Several discrete supercells formed off a dryline in the eastern parts of the panhandles in the late afternoon of the 2nd. These storms moved eastward through the evening, eventually congealing into a line before coming across central Oklahoma. After this round of storms made its way out of the area, scattered storms began to form from central Texas up into southwestern Oklahoma overnight, moving generally northeast into the early morning hours. Strong winds in association with these storms destroyed a mobile home north of Stillwater Regional Airport.
August 16, 2018	60	\$10,000	Storms formed in the vicinity of a warm front on the afternoon of the 16th across western Oklahoma and moved eastward from there. Several tree limbs were reported downed, including one six to eight inches in diameter which fell on a vehicle.
May 18, 2019	64	--	The beginning of a very active period in Oklahoma, the 18th started with a complex of thunderstorms that grew upscale producing wind and tornadoes in the morning and then finished with isolated supercells producing large hail across northern Oklahoma. Strong winds blew a large tree over in Stillwater. These storms were part of a larger outbreak which prompted the declaration of 4438-DR-OK to be issued.
June 10, 2022	71	--	Multiple convective complexes crossed the area late on the 9th and into the morning of the 10 producing widespread severe wind gusts.



Date	Wind Speed (mph)	Damage (USD)	Narrative
March 31, 2023	58	--	The passage of a vigorous upper system produced widespread and multi-faceted weather hazards across the Southern Plains on the 31st. Across Oklahoma, hazardous weather occurred behind the passage of a dryline/Pacific front during the afternoon into early evening hours. A 35-50 knot low-level jet, in concert with plentiful daytime insolation, lead to a widespread high wind episode. The combination of gusty winds, dry surface conditions, and ongoing drought also lead to numerous significant wildfires across central into northern Oklahoma.
May 13, 2023	61	--	Some severe and flood hazard, associated with convection from the 12th, lingered into the early morning hours of the 13th. By the afternoon, a few scattered storms developed in the vicinity of a remnant mesoscale convective vortex (MCV) as it translated across southwest into north-central Oklahoma. This convection produced a few reports of wind damage, large hail, and a brief (weak) tornado across portions of central Oklahoma. Numerous 2+ inch diameter tree limbs blown down across portions of the Oklahoma State University campus, with others reported on Highway 51, west of Pecan Valley Drive.
June 17, 2023	77	--	An unseasonably strong upper trough approached the region during the day on the 17th. Widespread thunderstorm development occurred across the High Plains, from southwest Kansas into the central Texas Panhandle by the late afternoon. The combination of anomalously (for mid-June) high magnitudes of wind shear and instability produced widespread severe weather outcomes across southern, central and northern Oklahoma. By the late evening hours, convection had organized into a mature bow echo across north-central Oklahoma, where numerous significant wind gusts (and damage) were observed. These storms were part of a larger outbreak which prompted the declaration of DR-4721-OK to be issued.



Date	Wind Speed (mph)	Damage (USD)	Narrative
August 13, 2023	70	--	Scattered high-based convection moved from the Texas Panhandle into portions of western Oklahoma during the afternoon of the 13th. Sufficient wind shear and instability combined to yield a mix of semi-organized cells and clusters across the region, resulting in a few reports of large hail with initial activity. By the evening, convection organized into a mesoscale convective system (MCS) and moved across portions of north-central Oklahoma. Multiple severe wind gusts were reported as this line swept through the aforementioned areas.
May 6, 2024	70	--	A significant severe weather outbreak, including ten (10) tornadoes, impacted northern and central portions of the WFO Norman Forecast Area during the evening of the 6th into the early morning hours of the 7th. The synoptic pattern across the western half of the Continental United States favored a significant severe weather episode across the region, with a powerful (110-120 knot) upper-level jet streak ejecting across the Central Plains during the evening of the 6th. In concert with robust kinematics in place, extreme instability (pockets of >4000-5000 J/kg of CAPE) promoted an environment favorable for significant severe weather. As such, the Storm Prediction Center issued a rare 'High Risk' of severe weather for portions of central and northern Oklahoma, the first to include portions of the WFO Norman Forecast Area since 20 May 2019. Initial supercell thunderstorms developed in the late afternoon off an accelerating dryline/Pacific front near the 100th meridian. With time, as storms matured and moved into an environment characterized by richer low-level moisture, and as low-level flow increased, multiple tornado occurrences did result, with strong winds recorded in Stillwater.
June 2, 2024	64	--	A cluster of thunderstorms was ongoing across southwestern Oklahoma and north Texas around daybreak on the 2nd. This activity was fostered by a nocturnal low-level jet across the region. As surface insolation began (i.e., instability increase), additional thunderstorm development continued from the areas mentioned above into portions of central/south-central Oklahoma. Hail and damaging wind gusts were observed with the strongest thunderstorms within the broader complex. Probable wake low wind event is the theorized mechanism responsible for these strong winds.



Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and 27 reported instances of high winds (estimated or observed to be 58 mph or greater) in the planning area over the 10-year period between 2015 and 2024, the probability of this hazard has been rated as **Highly Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the sub header titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-36 Vulnerability and Impact to High Wind in the City of Stillwater

Vulnerability	Impact
Students at Oklahoma State University who reside in locations which don’t experience the same hazards that occur in Stillwater, or to a similar extent that they occur here, are at risk of being caught off guard in such situations.	A student residing within the City who is not equipped with the proper awareness for a high wind event may find themselves in a situation where their life and well-being are imminently at risk.
Disadvantaged sectors of the City of Stillwater ’s population exhibit unique vulnerabilities to high winds. Access to adequate shelter, ability to receive and/or understand warnings, and physical ability to seek adequate shelter are just a few examples of such vulnerabilities.	Such examples like those highlighted here hold the potential to expose the life and well-being of these residents to the risks associated with high winds.
High wind events can cause power outages and damage to critical facilities.	In the event that damage to one or more critical facilities in the City of Stillwater coincides with power outages, residents, particularly those in the most vulnerable sectors of the population, may experience risks to their lives or their well-being.
Some critical facilities are not constructed to meet or exceed the requirements of FEMA P361 or 320.	Personnel staffing these facilities in the City of Stillwater may be at risk of injuries due to damage to these structures during high wind events.



Vulnerability	Impact
Damage or destruction to businesses from high winds in the City of Stillwater can disrupt the local economy.	Three primary impacts result from such an occurrence as that listed here: 1) Costs to owners of those businesses to repair/rebuild; 2) Loss of pay to employees and workers of those businesses during the repair/rebuild period; 3) If the affected businesses provide goods and services critical to the community, such as grocery stores, gas stations, pharmacies, etc., cascading risks to the mobility and the health and well-being of residents result.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Damaging winds in Oklahoma are associated with severe thunderstorms. More favorable environments for severe thunderstorms are expected and increases in severe wind occurrences are projected. Climate models project an increase in the frequency and intensity of severe thunderstorms over the Southern Great Plains, especially during the peak storm season (March, April, May). Uncertainty remains, however, in the assumption that the favorable environments will reach their potential of producing damaging winds (Kossin et al. 2017).

Land Use Development

Stillwater has already taken steps since the development of the previous plan in 2020 to ensure the resilience of future development in the community to natural hazards by adopting the 2018 ICC standard for the International Building Code. Additionally, the City has continued to maintain their safe room registration program and promotion of safe rooms that meet or exceed minimum FEMA and ICC-500 standards.

Population Patterns

Though Stillwater has a very good emergency management program, the impact of additional population in Stillwater during certain months of the year when the statistical probabilities for severe thunderstorms producing high winds makes the community as a whole more vulnerable to tornado events.



3.4.10. Tornado

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

A tornado is a violently rotating column of air, usually pendant to a cumulonimbus (cloud), with circulation extending from within the cloud to the ground. This hazard is considered the most destructive of all atmospheric phenomena.³⁰

While the vast majority of tornadoes produce winds of 110 mph or less, the strongest tornadoes have produced observed winds of approximately 300 mph. Regardless of the wind speed produced, the rotational nature of its winds can exacerbate the damage possible from any tornado that develops. This is a key distinguishing feature between the nature of risk that separates it from high winds.

Oklahoma, including Stillwater, are located within an area of the United States that has earned the moniker “Tornado Alley.” Tornadoes in Oklahoma can develop during any month of the year when conditions are present, though they most commonly develop during the spring months of March to May.

Location

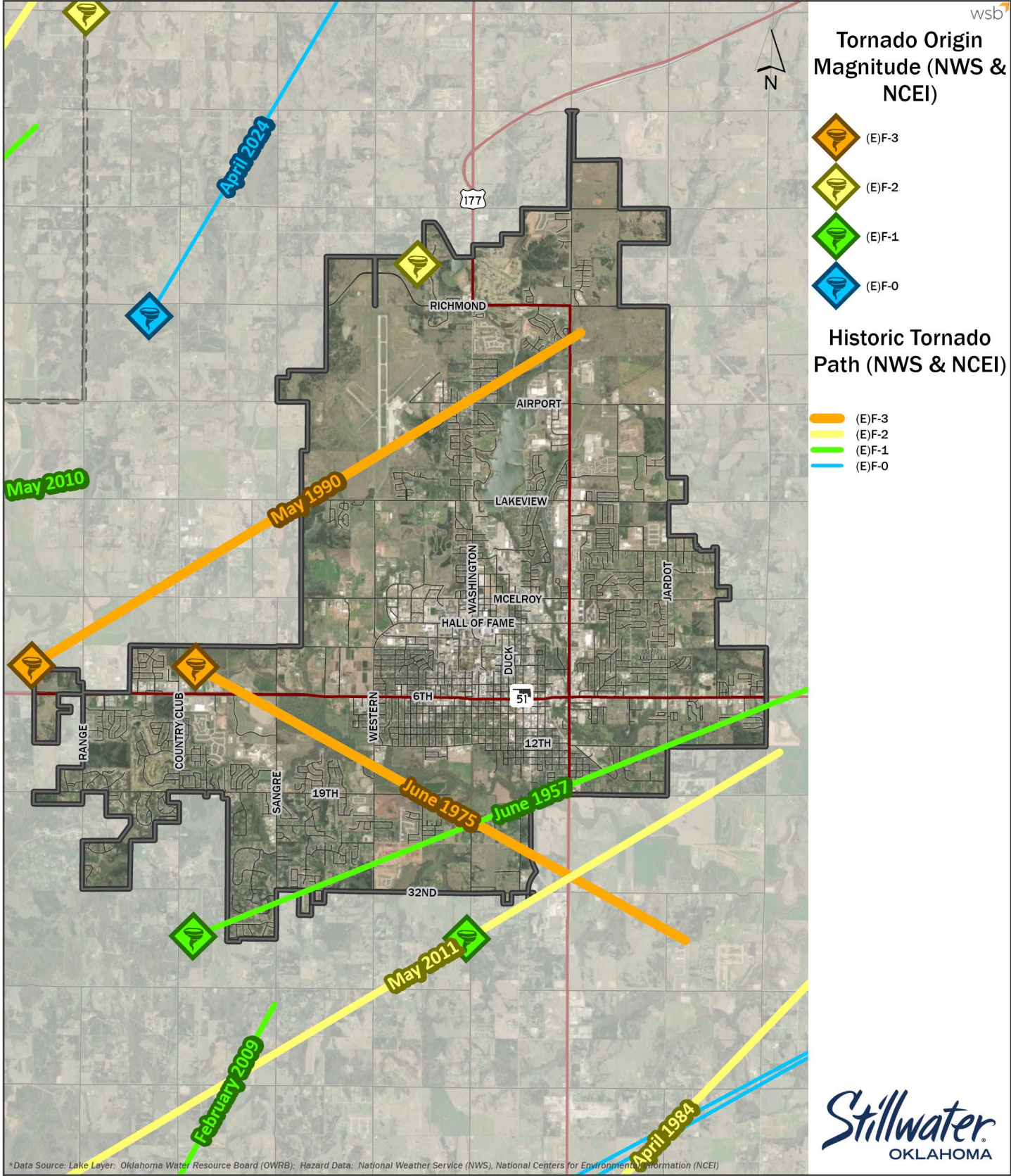
Element B1-b. Does the plan include information on the location of each identified hazard?

Tornadoes can occur anywhere in the planning area, and at any time of the year. Though tornadoes and the damage they produce are localized, **the probability of impact across the planning area is uniform**. Historic tornado paths across the City of Stillwater have been depicted in Figure 3-21.

³⁰ <https://w1.weather.gov/glossary/index.php?letter=t>



Figure 3-21 Historic Tornado Paths Across the City of Stillwater (NCEI)





Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

From its inception in 1971 through January 2007, tornado intensity was rated using the Fujita Scale (or F-Scale) of F0 to F5. This scale was based on wind speed and type of damage done by a tornado on manmade structures and damage to vegetation. After a determination based on ground and/or aerial damage survey, various data such as ground-swirl patterns, radar tracking, and eyewitness testimonies, NWS investigators will assign an official Fujita Scale category to a tornado.

Due to inadequacies in this metric, NOAA revised this scale to become the Enhanced Fujita Scale (EF-Scale), and it was implemented on February 1, 2007, to serve as a replacement for the original Fujita Scale. According to NOAA, the Enhanced Fujita Scale is a “set of wind estimates (not measurements) based on damage.” It uses 3-second gusts estimated at the point of damage based on a judgment of eight levels of damage to 28 indicators, such as small barns, single family residences, mobile homes, high rises more than 20 stories, transmission line towers, hardwood trees. In rural areas, where structures are not available, trees, towers and light poles are used as indicators. A tornado’s rating is determined by the highest rated indicator. Table 3-37 depicts the Enhanced Fujita Scale in tabular format.

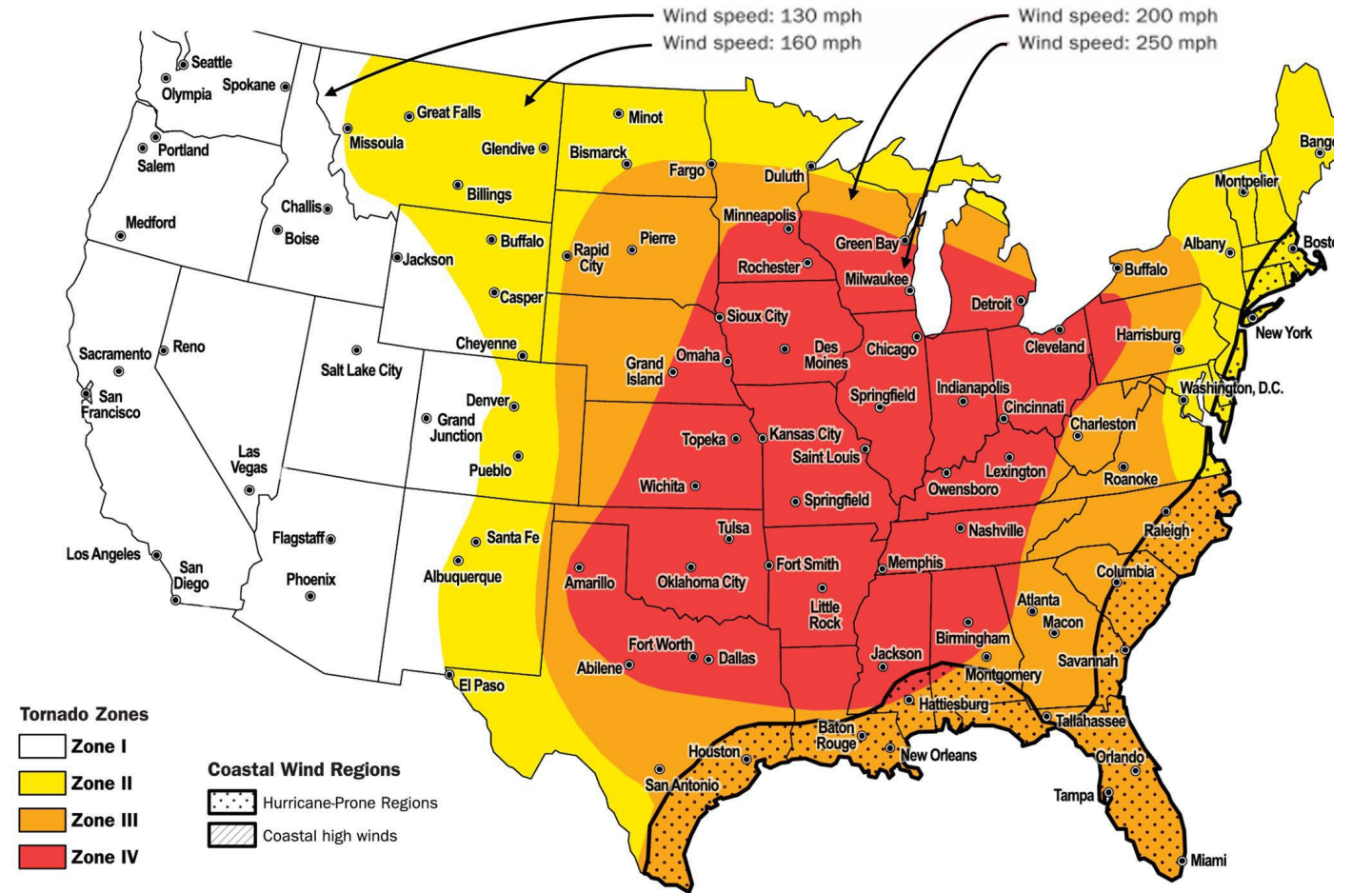
FEMA uses the EF Scale in its most recent guidance on safe rooms.³¹ As a supplement to the EF Scale, the ICC 500 (2020) wind speed zone map, depicted in Figure 3-22, has been produced by FEMA as part of their August 2021 document on the ICC/NSSA Standard for the Design and Construction of Storm Shelters shows that **the overwhelming majority of Oklahoma, including all of the planning area, can expect to experience tornado wind speeds ranging from EF-0 to EF-5.**

Table 3-37 Enhanced Fujita (EF) Scale for Tornadoes

Tornado Rating	3-Second Wind Gust
EF-0	65 mph – 85 mph
EF-1	86 mph – 110 mph
EF-2	111 mph – 135 mph
EF-3	136 mph – 165 mph
EF-4	166 mph – 200 mph
EF-5	> 200 mph

³¹ https://www.fema.gov/sites/default/files/documents/fema_safe-rooms-for-tornadoes-and-hurricanes_p-361.pdf

Figure 3-22 ICC 500 – 2020 Wind Speed Zone Map



Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Based on NCEI records of tornadoes between January 1, 2015, and December 31, 2024, there have been 4 tornadoes in the City of Stillwater, which have produced \$70,000 in damage. No injuries, nor any deaths caused by tornadoes were reported during this period. Each tornado that has tracked within the planning area during this period is profiled in Table 3-38.

Table 3-38 Tornado Events in the City of Stillwater (NCEI)

Date	EF Rating	Property Damage (USD)	Narrative
May 9, 2016	EF2	\$50,000	With the help of an upper low, storms fired along the dryline in central Oklahoma on the 9th, with some of them becoming severe. A tornado moved into Payne County from Noble County near Glencoe road moving northeast and then north-northeast crossing back into Noble County between Country Club Road and Sangre Road, passing northwest of Stillwater Regional Airport. At least two houses and two outbuildings were damaged in Payne County in addition to tree and power pole damage.



Date	EF Rating	Property Damage (USD)	Narrative
July 3, 2016	EF1	--	On the evening of the 3rd, a line of storms formed along a front across Oklahoma and western north Texas and moved slowly eastward, producing severe weather, a tornado, and flash flooding. A tornado was reported by spotters southeast of Stillwater, documented with public photos. County EM reported damage just north of 32nd and Prairie Rd.
May 18, 2019	EF0	\$10,000	The beginning of a very active period, the 18th started with a complex of thunderstorms that grew upscale producing wind and tornadoes in the morning and then finished with isolated supercells producing large hail across northern Oklahoma. An outbuilding and detached garage southeast of Stillwater were significantly damaged by a brief QLCS tornado. These storms were part of a larger, extended outbreak that prompted the issuance of 4438-DR-OK.
April 27, 2024	EF0	\$10,000	A widespread, long-duration and historic severe weather and tornado outbreak occurred from the late morning through late evening on the 27th. In all, 32 tornadoes affected portions of the WFO Norman Forecast Area, the third most in a single day during the period of reliable record. A tornado touched down near Richmond Road just west of Country Club Road in northern Payne County damaging trees in the area. Trees and outbuildings were also damaged near Lone Chimney Road and Western Road to the northeast. This tornado may not have been continuous along this path.

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and four records of tornadoes which have affected the planning area recorded in the NCEI database between 2015 and 2024, the probability of this hazard is rated as **Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the sub header titled "Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns."



Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-39 Vulnerability and Impact to Tornado in the City of Stillwater

Vulnerability	Impact
A significant portion of residents rely on outdoor warning sirens as their primary notification of an approaching tornado.	Public misperception regarding the intent of outdoor warning sirens to serve as a mechanism to warn those outdoors can lead to those who are indoors to have a false sense of complacency if they are unable to hear those sirens and don't have other methods of receiving warning information. The result is the potential for deaths and injuries in the City of Stillwater should a tornado directly impact these individuals.
Students at Oklahoma State University who reside in locations which don't experience the same hazards that occur in Stillwater, or to a similar extent that they occur here, are at risk of being caught off guard in such situations.	A student who is not equipped with the proper awareness for a tornado event may find themselves in a situation where their life and well-being are imminently at risk. Such a situation would affect the City of Stillwater , since the University is in the City.
Disadvantaged sectors of Stillwater's population exhibit unique vulnerabilities to tornadoes. Access to adequate shelter, ability to receive and/or understand warnings, and physical ability to seek adequate shelter are just a few examples of such vulnerabilities.	Such examples like those highlighted here hold the potential to expose the life and well-being of these residents of the City of Stillwater to the risks associated with tornadoes.
Due to the sometimes sudden nature of how a tornado develops, the lack of adequate safe room(s) that is/are quickly accessible by students and staff can cause them to be vulnerable to the damage and destruction caused by a tornado.	Some schools that have safe rooms or adequate shelter may have them located that require a longer period of transit to reach them from their classroom or work location for students and staff, which exposes the life and well-being of these individuals to the risks associated with tornadoes.
Some critical facilities are not constructed to meet or exceed the requirements of FEMA P361 or 320.	Personnel staffing these facilities in the City of Stillwater may be at risk of injuries due to damage to these structures during high wind events.
Damage or destruction to businesses from tornadoes in the City of Stillwater can disrupt the local economy.	Three primary impacts result from such an occurrence as that listed here: 1) Costs to owners of those businesses to repair/rebuild; 2) Loss of pay to employees and workers of those businesses during the repair/rebuild period; 3) If the affected businesses provide goods and services critical to the community, such as grocery stores, gas stations, pharmacies, etc., cascading risks to the mobility and the health and well-being of residents result.



Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Records over the past 40 years show that there has been an increase in the frequency of days with many tornadoes (i.e., tornado outbreaks). However, there has also been a decrease in the frequency of days with tornadoes (Kossin et al. 2017). In other words, increasingly, when tornadoes occur, they are more likely to occur in conjunction with a tornado outbreak. It is currently difficult to account for tornadoes in climate models because they occur on a small scale. Therefore, more research is needed to understand how climate change is influencing tornadoes (Walsh et al. 2014). Progress has recently been made, however, in understanding how the large-scale climate system relates to the conditions that support tornadoes. As such, climate models project an increase in the frequency and intensity of severe thunderstorms, which can include tornadoes, most commonly during the months of March, April, and May. However, confidence in the details of this projected increase remains low (Kossin et al. 2017).

Land Use Development

Stillwater has already taken steps since the development of the previous plan in 2020 to ensure the resilience of future development in the community to natural hazards by adopting the 2018 ICC standard for the International Building Code. Additionally, the City has continued to maintain their safe room registration program and promotion of safe rooms that meet or exceed minimum FEMA and ICC-500 standards.

Population Patterns

Though Stillwater has a very good emergency management program, the impact of additional population in Stillwater during certain months of the year when tornadoes are statistically more likely makes the community as a whole more vulnerable to tornado events.

3.4.11. Severe Winter Storms/Extreme Cold

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

This Plan defines a winter storm as a single event or a combination of the following winter weather types occurring over a wide segment of the planning area. Below are definitions for the types of winter storms that can affect Stillwater:

- **Extreme Cold** – While this can be considered an ambiguously defined hazard, the Southern Climate Impacts Planning Program (SCIPP) notes that the World Meteorological Organization (WMO) has recommended characterizing a cold wave, and by proxy extreme cold, by its magnitude, duration, severity, and extent. Magnitude for extreme cold can be defined as temperature which falls below a certain threshold based on local climatology, evaluated either as an absolute or by percentile.
- **Wind Chill** – Apparent temperature that describes the cooling effect on exposed skin by the combination of temperature and wind, expressed as a loss of body heat. An increase in wind speed or decrease in temperature will accelerate the effect. A wind chill factor of 30°F or lower on exposed skin will result in frostbite in a short period of time.
- **Freezing rain or freezing drizzle** - An occasion when rain or drizzle freezes on surfaces such as trees, power lines, and highways.



- **Ice storm** - Described by the NWS as an occasion when damaging accumulations of ice are expected during freezing rain situations. Significant ice accumulations are usually accumulations of 0.25 inch or greater.
- **Sleet** – Defined as pellets of ice composed of frozen or mostly frozen raindrops or refrozen, partially melted snowflakes. Sleet accumulations can have the appearance of snow on surfaces after it has settled, but sleet is distinguished by a firmer consistency, as opposed to snow, which has a softer consistency.
- **Heavy snow** - Defined as either a snowfall accumulating up to 4 inches in depth in 12 hours or less, or snowfall accumulation of 6 inches or more in 24 hours or less.
- **Blizzard** – While this hazard is an infrequent occurrence in Payne County, blizzards are very impactful events when they do happen. It has two defining characteristics, according to the National Weather Service: falling and/or blowing snow reducing visibility to less than ¼ mile accompanied by sustained wind, or frequent gusts, up to or exceeding 35 mph for 3 hours or longer.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Given the size and areal coverage of upper-level atmospheric systems which produce severe winter storms and extreme cold, which typically span a large geographical area in the United States at a given time, the risks to these hazards can be considered uniform across the City of Stillwater.

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

Extent of severe winter storms and extreme cold can be determined by their duration and severity. Several factors play a part in determining a winter storm's severity, such as precipitation type, precipitation rate, precipitation totals, and temperatures.

During the winter months, the planning area can experience storms that bring a variety of freezing precipitation along with high winds. For the City of Stillwater, total precipitation during the winter season is typically less than other times of the year, with about 7.5 inches of snow expected annually between the months of November and March³². During the winter of 1987-88 is when the greatest seasonal snowfall was recorded, with 30.8 inches between September 1987 and April 1988, while the greatest daily snowfall amount occurred on March 9, 1994, when 13.0 inches of snow fell³³. **Thus, the City of Stillwater can reasonably expect up to about 31 inches of snow in a given year, and up to 13 inches in one 24-hour period.**

Ice glaze and accumulations are another hazard associated with winter storms that may be experienced across the planning area. Depicted in Table 3-40, the Sperry-Piltz Ice Accumulation (SPIA®) Index is an ice accumulation and damage prediction index developed to predict an ice storm's projected footprint, total accumulation, and resulting damage potential from a storm. This Index is used to predict the location, timing, and severity of ice storm impacts days in advance. It serves as a tool that allows schools, power cooperatives, and other entities to better prepare for severe ice events. **Stillwater can expect to experience a SPIA Index ranging anywhere from 0 to 5.**

³² Data for this estimate obtained from National Weather Service Forecast Office Monthly Climate Normals (1991-2020) for Stillwater, OK.

³³ Data for snowfall extremes was extracted from Payne County records on file with the Oklahoma Climatological Survey found in the County Climate Summary.



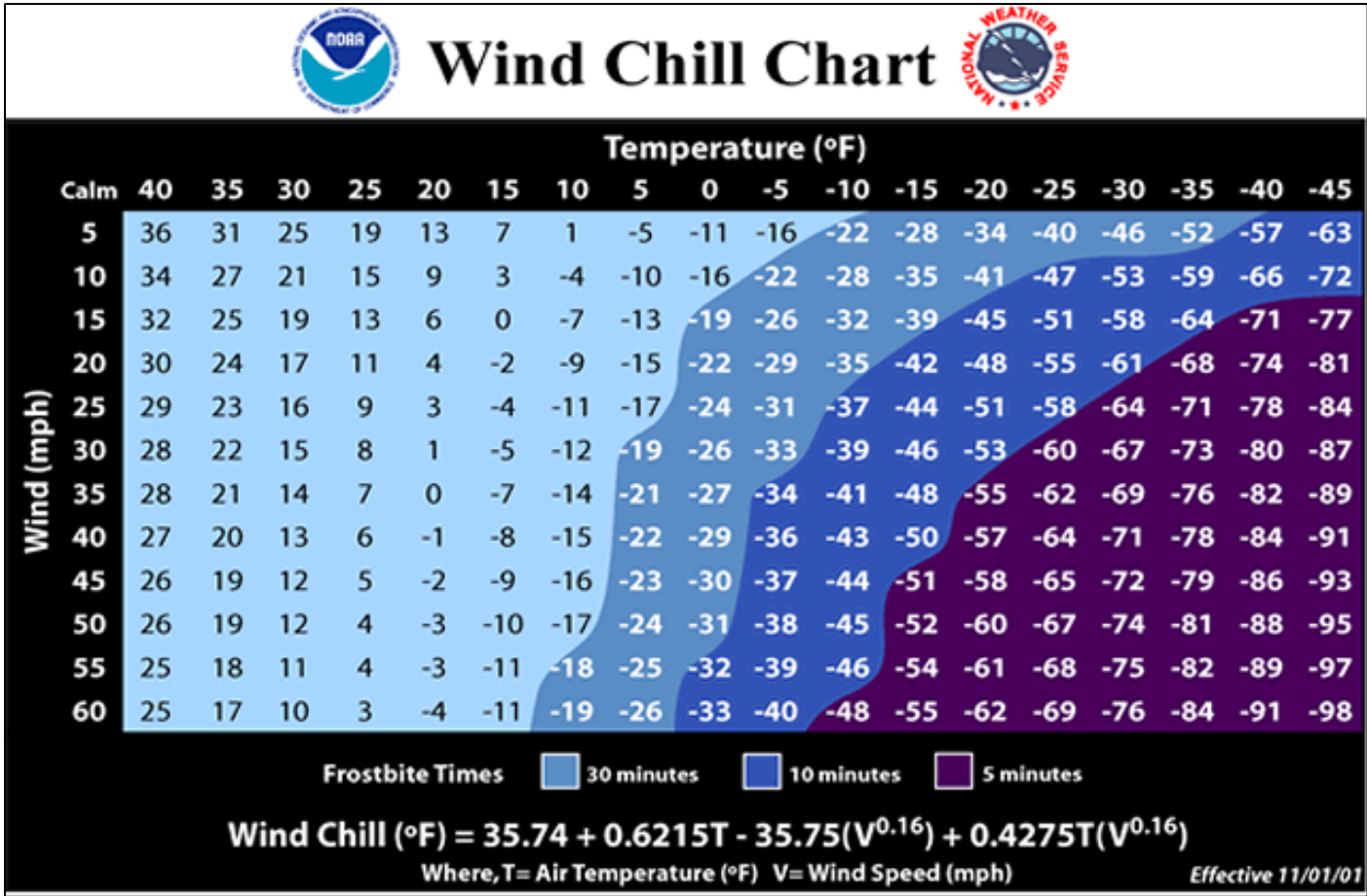
Table 3-40 Sperry-Piltz Ice Accumulation (SPIA) Index

Ice Damage Index	Damage and Impact Descriptions
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 to 5 days.
4	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines/structures. Outages lasting 5 to 10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

Created by the U.S. National Weather Service (NWS) and depicted in Figure 3-23, the Wind Chill Chart indicates frostbite times based on exposure to temperatures as low as -45°F for a range of wind speeds up to 60 mph. In Stillwater, the coldest temperature observed was -19°F on February 10, 2011. Winds in association with winter storms can range up to 50 mph in the most extreme cases. **Thus, a calculated wind chill temperature from these two factors produces a value as low as -58°F in the planning area during an extreme cold event, which corresponds with a frostbite onset time of approximately 5 minutes.**



Figure 3-23 Wind Chill Chart (NWS)



Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Previous occurrences for severe winter storms and extreme cold in the NCEI Storm Events Database between January 1, 2015, and December 31, 2024, were returned under the following types: cold/wind chill, extreme cold/wind chill, frost/freeze, heavy snow, ice storm, winter storm, winter weather.

During this period, the NCEI database possesses 16 discrete occurrences of these winter storms and extreme cold events in Stillwater, which have been listed in Table 3-41.

Table 3-41 Notable Severe Winter Storms in the City of Stillwater

Date	Type(s)	Narrative
February 16, 2015	Winter Weather	A potent cold front moved through Oklahoma during the overnight hours of the 14th, with cold temperatures filling into the region early on the 15th. An upper level trough then moved through, bringing abundant moisture up and over the cold airmass. This resulted in wintry weather over much of northern and western Oklahoma.



Date	Type(s)	Narrative
February 22-23, 2015	Winter Weather	A deep arctic airmass had settled into the Southern Plains region in the wake of a strong cold front. As a belt of strong upper level westerlies developed atop this deep cold airmass, widespread snow affected Oklahoma. Snow showers came in two waves--one light wave early on the 22nd and then a heavier wave through the 23rd. By the time the snow ended, many areas across Oklahoma received accumulations. Total Snowfall measurements were around 1.5 inches at Stillwater.
February 27-28, 2015	Winter Weather	A deep Arctic airmass had settled into the Southern Plains. Several upper level disturbances moved across the region, bringing moderate to heavy snow to parts of the area. Snow came in two waves, with the heaviest snow being confined to both northwestern Oklahoma and south central and southeastern Oklahoma. Snow began by late morning on the 27th and lasted through the late morning hours of the 28th. By the time snow had ended, around 2 inches had fallen in Stillwater.
March 4, 2015	Winter Weather	A strong cold front surged through Oklahoma early on the 4th, bringing an Arctic airmass into much of the Southern Plains. As this occurred, a large scale upper level trough shifted eastward across the Southern and Central Plains region, resulting in widespread wintry precipitation. Several inches of snow and sleet fell, with significant impacts to travel. Light freezing rain mixed with sleet during the morning, transitioning to snow during the afternoon and evening. By the time snow had ended, Stillwater and Perkins had picked up around 2 inches of snow.
November 27-29, 2015	Ice Storm	An upper low moving in combined with abundant moisture from the gulf to produce a four day rain event from the 26th through the 29th. When strong front came down Thursday night (11/26), temperatures began to drop below freezing across northern, western, and central Oklahoma and parts of western north Texas. These areas experienced a shift from rain to freezing rain. Freezing rain continued into early Sunday morning as temperatures continued to hover in the 20s to lower 30s. Observed 0.25 inches of ice accumulation. Ice caused power outages for 1380 customers and \$2,000 in reported damage. Damage estimates are from local power cooperatives.
February 5, 2020	Winter Storm	A slow moving trough over the Rockies led to widespread snow, sleet, and freezing rain across the southern Plains. A band of heavy snow fell along the I-44 corridor where 4 to 8 inches of snow was observed. A second heavy band was also observed southeast of there, from Ada northeastward. Four to six inches of snow fell across Payne County.



Date	Type(s)	Narrative
October 26-28, 2020	Ice Storm	A historic early season ice storm occurred over a several day period on the morning of the 26th and continuing into the evening of the 28th. Freezing rain and sleet were reported across much of central and western Oklahoma, with some snow reported as well across far northwest Oklahoma. Extreme freezing rain accumulations of at least 1.5 inches were reported in west-central Oklahoma over the 3 day period, with greater than 0.5 inch totals reported over a large area from Ponca City to Oklahoma City to Lawton to Clinton. Hundreds of thousands of people were without power by the 28th and extensive tree and powerline damage was reported across much of the area. Ice accreted 0.20 - 0.80 across the county. Partial damage estimates reached \$885,000.
December 13, 2020	Heavy Snow	A closed low brought heavy snow to much of northern into central Oklahoma, with the heaviest snow falling during the morning hours of the 13th. A general 4 to 6 inches of snow fell across Payne County.
February 14-17, 2021	Heavy Snow, Cold/Wind Chill	An impressive, record cold airmass became entrenched for several days as an upper level trough crossed the region. This system produced heavy snow along with extreme and record-breaking cold during this period. A storm total of about 9.5 inches of snow reported in Stillwater, accompanied by air temperatures in the -10°F to -20°F range and wind chills as low as -35°F.
February 23, 2022	Winter Storm	A broad western trough brought lift and moisture into the region over top a frigid arctic airmass near the surface. This led to a prolonged period of mainly sleet on the 23rd and 24th, with thunder and lighting also observed at times. Some areas picked up 1-2 of sleet accumulation, with up to a tenth of an inch of freezing rain across southeast Oklahoma. The sleet and ice caused several accidents across the area, with at least 11 accidents including 4 rollover accidents reported. Up to a half inch of sleet accumulation with a glaze of freezing rain was reported across Payne County.
February 2, 2023	Winter Weather	A cold airmass was entrenched across the area on the 1st as an upper low approached the region. Light freezing rain, generally less than a tenth of an inch, fell across central and southern Oklahoma from the afternoon of the 1st through early morning hours on the 2nd. Numerous accidents, including two fatal, were reported across the area. Light freezing rain/drizzle created hazardous travel throughout the county. A one-car accident early on the morning of the 2nd lead to the fatality of a motorist. This accident occurred on State Highway 33 about 4 miles east of Coyle, OK.



Date	Type(s)	Narrative
October 30, 2023	Frost/Freeze	As a 1030 millibar high pressure cell settled across the Colorado Front Range, a cold airmass (with Canadian origin) spread across the Central and Southern Plains. The first freeze of the fall/winter season was noted for most locations across northern, central, and southern Oklahoma during predawn hours of the 30th and/or 31st.
January 13-16, 2024	Cold/Extreme Cold/Wind Chill	Behind the passage of a high amplitude/strong upper wave on the 11th, a prolonged cold intrusion, originating across high latitudes, impacted much of the central United States. Wind chill readings as low as -20 to -25 degrees were noted. The coldest day of the sequence occurred on the 14th, with an average temperature of 5 degrees across much of the area. In total, temperatures remained below freezing for 113-146 consecutive hours during the period.
January 19, 2024	Cold/Wind Chill	A high latitude airmass settled across northern portions of the WFO Norman Forecast Area on the morning of the 19th. This resulted in wind chill values ranging from -5 to -20-degrees across portions of the area.
January 21-22, 2024	Winter Weather	A shortwave upper trough approached the region from the 21st into 22nd. While pronounced warm air advection was underway by the afternoon of the 21st, very cold surface/ground conditions from prior periods of single digit temperatures promoted an environment receptive to frozen precipitation. Aforementioned warm air advection promoted a warm nose aloft which contributed to freezing rain being the dominate precipitation type during the event. While total ice accretion fell below Ice Storm Warning criteria, significant and widespread travel impact (due to ice covered roadways) occurred from the late evening of the 21st through morning commute on the 22nd (mainly along and east of the Interstate 35 corridor). A prolonged period of light freezing rain, with total ice accretion between one-tenth and one-quarter of an inch, resulted in slick and hazardous travel conditions/roadways.
October 16, 2024	Frost/Freeze	The first freeze of the fall/winter season affected portions of western, central and northern Oklahoma during the early morning of the 16th.

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and sixteen occurrences of severe winter storms and extreme cold in the ten years between January 1, 2015 and December 31, 2024 found in the NCEI database, the probability of this hazard affecting the planning area has been rated as **Highly Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled "Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns."



Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-42 Vulnerability and Impact to Severe Winter Storms/Extreme Cold in the City of Stillwater

Vulnerability	Impact
Loss of electrical and/or natural gas service can expose residents to the risks to health associated with this hazard. Residents living in poverty in the City of Stillwater may not have access to safe and adequate heating sources during hazard events, regardless of service interruptions.	Individuals who do not have access to safe and adequate heating during severe winter storm and extreme cold events may experience hypothermia, which is a serious risk to health and may even lead to death.
Lack of education and awareness of safe heating sources and other risks to health that have been reported in association with this hazard may lead some residents to seek warmth using unsafe methods.	Residents in the City of Stillwater who seek unsafe methods to find warmth during periods of extreme cold, like using propane or charcoal fired grills in enclosed areas, put themselves at risk of smoke inhalation related health conditions. Additionally, if the flames are left open in these enclosed areas, a secondary risk of structural fire may result, which opens up the risks associated with that hazard.
Critical facilities without backup electrical generation capabilities will not be able to provide critical FEMA Community Lifelines to residents who may rely on such services.	Adverse effects on the City of Stillwater's may range from inconvenience to critical risks to health, which may then cascade and then cause strain to the City's first responders and health and medical services.
Businesses operating in the City of Stillwater that provide goods and services critical to residents, like grocery stores and gas stations, who lack backup electrical generation capabilities potentially inhibit residents' access to food, water, and transportation.	Not only are immediate risks to residents, such as those to health and well-being, evident in this situation, food spoilage of perishable food items in grocery stores can lead to supply chain disruptions that may mean such items are unavailable for a period of several days or up to 2 or 3 weeks, until supplies can be replenished.
Medical facilities without backup electrical generation capabilities, like hospitals and nursing homes, may expose City of Stillwater residents who rely on continuous electrical service at these facilities to be exposed to risks to their health and even their lives.	Such a situation would result in a health crisis that would affect vulnerable populations, most notably the elderly, the disabled, and those with chronic health conditions.



Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Years consisting of a large number of snowfall days declined significantly across the southern United States between 1930 and 2007. Models suggest that although the number of snowfall events will likely continue to decrease given overall atmospheric warming, when snow does occur, accumulations will be greater due to increases in atmospheric moisture (Krasting et al. 2013). There is significant uncertainty surrounding the future of ice storms in Oklahoma. Observational data limitations and the complexity of the events themselves make it difficult to determine with much specificity whether patterns have and/or will change. Models show that by mid-century there will generally be a northward shift of the rain, sleet and snow dividing line across the central United States. This shift will add to the complexity of determining precipitation type for winter events (rain, ice, or snow) in Oklahoma, however, the increase in atmospheric moisture may bring an increase to the amount of precipitation that does fall (Easterling et al. 2017).

Land Use Development

Existing development may be exposed to the risk of damage from excessive snow accumulation, or from fallen tree branches which snap due to weight of excessive snow and/or ice. Additionally, structures which are not sufficiently insulated and those with water lines which are exposed to extreme cold temperature pose risks to their occupants.

In order to protect occupants from cold temperatures making their way inside, new and future development can incorporate building materials and methods that are resistant to temperature extremes, such as installation of adequate insulation and water lines that are sufficiently insulated and installed in such a way that they are protected from freezing to the greatest extent possible. Additionally, Stillwater Electric Utility can opt to bury or harden electrical delivery infrastructure in areas of new development when feasible in order to ensure a higher level of resilience to this hazard.

Population Patterns

Continued growth of Stillwater's population translates to an increased risk of exposure of the risks associated with severe winter storms and extreme cold to new residents. Such risks include hypothermia, vehicular incidents, and injuries due to slips and falls, which are exacerbated for residents who relocate to the planning area from areas with warmer climates that do not receive these types of weather.



Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

As outlined in the 2024 Standard Hazard Mitigation Plan for the State of Oklahoma³⁵, the potential for expansive soil events across the state is possible, given the right soil and weather conditions. This includes the City of Stillwater. Soil contraction can occur as a cascading hazard resulting from drought events, which can further cause detrimental effects to infrastructure and the built environment.

Extent of expansive soils can be measured using linear extensibility. U.S. Department of Agriculture (USDA) defines linear extensibility as the change in length of an unconfined clod (of soil) as moisture content is decreased from a moist to a dry state.³⁶ Linear extensibility is used to determine the shrink-swell potential of soils. Table 3-43 depicts the classification scale for the coefficient of linear extensibility (COLE). This scale assigns a classification to a range of linear extensibility. Those soils with lower shrink/swell potential have a COLE value of less than 0.03 (3%), while those with very high shrink/swell potential are those with COLE values greater than 0.09 (9%).

Table 3-43 Classification of Coefficient of Linear Extensibility (COLE)

Class	COLE
Low	Less than 0.03
Moderate	0.03 to 0.06
High	0.06 to 0.09
Very High	Greater than 0.09

Soils across the planning area are observed in the NRCS Web Soil Survey, Soil Data Explorer, Soil Reports³⁷ to have linear extensibility ranging from 0.0% to 12.5%, spanning the full range of classifications in Table 3-43.

Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

Since this is a hazard which develops gradually and seldom presents a threat to life and can be considered to be a cascading hazard which results from drought, problems may not be recognized as being related to expansive soils or may be considered only nuisances, and therefore never repaired or reported.

As discussed in the 2024 Standard Hazard Mitigation Plan for the Great State of Oklahoma³⁸, disaster information on expansive soils in Oklahoma is not available since no catastrophic events because of this hazard have been declared. **No history for the planning area is available for this hazard, because there are no reported losses that are attributed to expansive soils as the direct cause.** Since this hazard develops gradually, it is difficult to assign dollar amounts of losses to this hazard.

³⁵ <https://oklahoma.gov/oem/programs-and-services/mitigation/state-hazard-mitigation-plan.html>

³⁶ <https://efotg.sc.egov.usda.gov/references/Delete/2007-12-15/soilpropqual.htm#:~:text=Linear%20extensibility%20refers%20to%20the,moist%20to%20a%20dry%20state>

³⁷ <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

³⁸ <https://oklahoma.gov/oem/programs-and-services/mitigation/state-hazard-mitigation-plan.html>



Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and zero (0) occurrence of expansive soils noted within the planning area as described in previous sections over the past 10 years, the probability of this hazard has been rated as **Unlikely**. A data deficiency in the number of reports as well as reporting techniques may influence the low number of observed occurrences, and actual probability may in reality be higher. However, such an examination into this data deficiency is outside of the scope of this project and will require a separate study(s).

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the subheader titled "Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns."

Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-44 Vulnerabilities and Impacts due to Expansive Soils in the City of Stillwater

Vulnerability	Impact
Soil pulling away from structural foundations may result in damage to buildings situated on them.	Drought and expansive soils often go hand-in-hand and pose an existential threat in Oklahoma. Should such an occurrence affect an impoverished City of Stillwater resident, the costs to repair a compromised foundation and/or damage to the integrity of their home may be too insurmountable for them. Damage to the integrity of structures as a result of such an occurrence may also go unnoticed, or the owners/occupants of such structures may lack awareness of the signs of such damage. In this case, occupants of these buildings are at risk of the structure failing, which pose a risk to their health and their lives.
Costly damage to school facilities which result from expansive soils may occur. Such damage, which may be subtle at first, may not be detected until the costs to restore the integrity of affected building(s) becomes significant.	If damage occurs to school structures resulting from shifting foundations due to expansive soils, the integrity of affected structures may experience increasing risk of failure with respect to time until, or if, they are repaired, posing a risk of injury or even death to students and staff in the affected buildings.



Vulnerability	Impact
Expansive soils have produced damage to the City of Stillwater's MS4 systems. Similar damage continues to be possible in the future.	Critical water conveyance infrastructure that make up MS4 systems, including public water supply lines, stormwater drainage infrastructure and sanitary sewer systems, have experienced breaks due to swelling and receding soils. Not only can this strain personnel resources in the City's Water Department and having to continuously monitor this infrastructure, but residents also experience effects in the form of disrupted service and potentially health hazards due to compromised quality of drinking water and sewage spills/seepage.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

As noted earlier in this hazard's profile, expansive soils in the planning area are a cascading hazard resulting from drought. As such, the risk for expansive soils to the planning area as it relates to future climatological conditions is a function of the City's and the District's risk of severe and extreme drought.

As noted in the climatological changes discussion in Section 3.4.2, droughts are projected to increase in severity and frequency in the future (Frankson et al. 2022). Even if annual precipitation amounts do not change much, higher temperatures will increase evaporation from lakes, soils, and plants, stressing agricultural and natural systems. Models project that Oklahoma will experience a decrease in soil moisture across all seasons by the end of the century, with the greatest decrease in the summer (Wehner et al. 2017).

Land Use Development

Existing and future development are at risk of soils pulling away from foundations during periods of extreme drought, causing them to shift and resulting in damage to the integrity of structures. Additionally, paved roads and other concrete surfaces around the City are similarly at risk of damage as a result of shifting and subsiding soils due to drought.

Communities, such as Stillwater, who participate in CRS may elect to require soil tests or engineered foundation as a part of the community's regulatory structure or permitting practices in order to receive additional credit in the program. Doing so can provide benefits to the community by enhancing the resilience of new development to expansive soils in addition to protecting them from the effects of flooding.

City officials have noted that they have observed that structures with stem wall foundations are more resistant to swelling and shrinking soils than structures with slab on grade foundations.

Population Patterns

Changes in the City's population may experience a range of effects from expansive soils, from imperceptible to disruption of water, gas, and utility service and degraded integrity of residential and other structures, including those maintained by the City.



3.4.13. Hazardous Materials

Description

Element B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?

Chemicals are everywhere. They are a part of our daily lives – purifying drinking water, increasing crop production, and simplifying household chores. However, chemicals can be hazardous to humans or the environment if used or released improperly, and as a result, hazards can occur during production, storage, transportation, use, or disposal. Hazardous materials (Hazmat) in various forms can cause serious injury, long-lasting health effects, and even death, as well as damage to buildings, homes, and other property. Chemicals are used in industry, agriculture, medicine, research, and consumer goods and can come in the form of explosives, flammable and combustible substances, poisons, and radioactive materials. In recent years, the increased usage of chemically dependent products and the introduction of new chemicals, materials, and substances into commerce has resulted in a corresponding increase in the number of accidents and spills involving toxic and hazardous materials.

Substances are most often released because of chemical accidents at plant sites or transportation accidents. Accordingly, for regulatory purposes, hazardous materials are divided into two general categories: Fixed Sites and Transportation. Stillwater is subject to hazards associated with both sources due to the location of several major transportation systems - a local airport, a federal highway, and state highways - and multiple Tier II sites scattered throughout all the County and within a 2-mile perimeter of its boundaries. As a result, the entirety of the planning area is at risk if a hazardous chemical or material is used unsafely or released in dangerous amounts into the environment where residents live, work, and play.

According to the Institute of Hazardous Materials Management (IHMM), a hazardous material is defined as “any item or agent (biological, chemical, radiological and/or physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.”

To help communities plan for emergencies involving hazardous substances and to inform citizens, the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 was enacted. As a result, any site with hazardous chemicals above certain threshold levels for any 24-hour period which requires a Material Safety Data Sheet (MSDS) under the OSHA Hazard Communication Standards are classified as Tier II Sites. Detailed systems for keeping track of these sites have been established by the Federal government.

Location

Element B1-b. Does the plan include information on the location of each identified hazard?

Hazardous materials are widely stored and transported throughout Stillwater. **An event involving a hazardous materials release could occur almost anywhere in the planning area.** The location of a hazardous materials release is classified in one of two manners: fixed site or in-transit.

Fixed Site

Fixed site incidents of hazardous materials releases are categorized as those involving the uncontrolled release of materials from a fixed site capable of posing a risk to health, safety, and property as determined by the Resource Conservation and Recovery Act (RCRA). Such incidents are relatively easy to prepare for because Federal and state laws require facilities where hazardous materials are stored to notify state and local authorities about their use or production at the site, and are regulated by the EPA. These sites are referred to as Tier II sites, and operators of these sites in Oklahoma must



submit information to appropriate state and/or local agencies to facilitate emergency planning when they have such materials in quantities at or above the threshold planning quantity (TPQ).

In-transit (Transportation)

Incidents where uncontrolled hazardous materials releases occur while in-transit that pose a risk to health, safety, and property are regulated by the U.S. Department of Transportation (U.S. DOT). Transportation of hazardous waste in Oklahoma is regulated by the Oklahoma Department of Transportation (ODOT).

City officials note that Highways 51 and U.S. 177 are designated thoroughfares for transport of nuclear waste and other hazardous materials. Tier II reports are updated with the Oklahoma Department of Environmental Quality (ODEQ) regularly to ensure location and quantities of hazardous materials.

Extent

Element B1-c. Does the plan describe the extent for each identified hazard?

Given the multitude of hazardous materials and their various effects, it can be difficult to determine the extent of hazardous materials events in Stillwater. Such an examination is outside the scope of this document. With a hazardous substance release, whether accidental or intentional, several potentially exacerbating or mitigating circumstances will affect the severity of the impact, however. Characteristics that can enhance or magnify the effects of a hazardous substance release include:

- Weather conditions, which affect how the hazard occurs and develops (such as wind speed and direction)
- Micro-meteorological effects of buildings and terrain, which alters the dispersion of hazardous substances in compliance with applicable codes (such as building or fire codes)
- Mechanical failures (such as fire protection and containment features), which can substantially increase the damage to the facility itself and to surrounding buildings.
- Land use, population, and building density will be factors contributing to the extent of exposure and impacts incurred.

The severity of a hazardous material incident is dependent not only upon the circumstances described above, but also on the type of substance released, distance from the release, and the related response time for emergency response teams to stabilize and contain the release. **Locations within the planning area closest to a release are at the greatest risk, due to their exposure to higher concentrations of the substance and the limited warning time before being impacted. Nonetheless, depending on the substance/material, a release can rapidly travel great distances across the planning area or remain present in the environment for long periods of time (e.g., centuries to millennia), allowing for greater dispersal and increasing the spatial extent of the impact.**



Figure 3-25 Tier II Sites Across the Planning Area

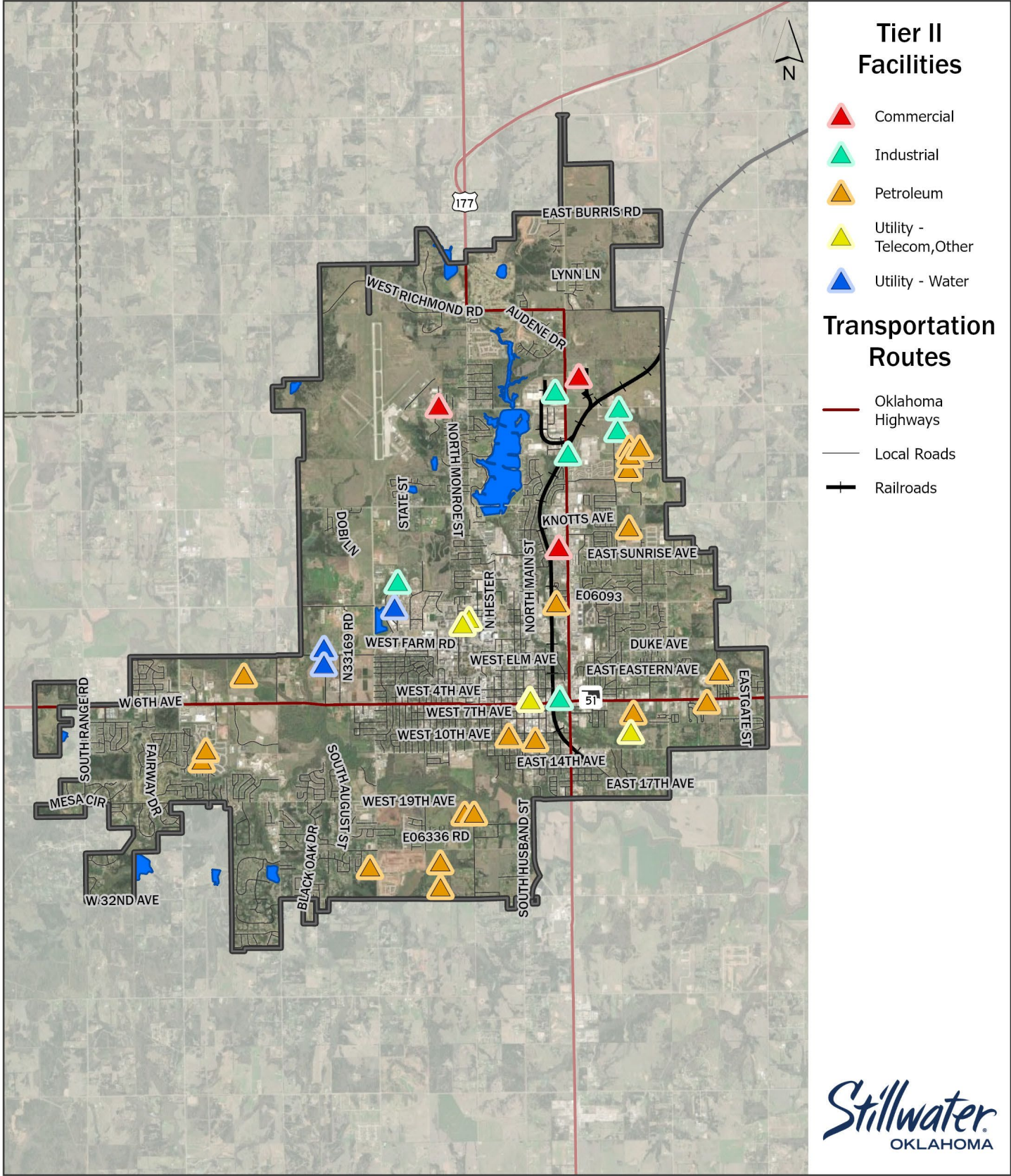
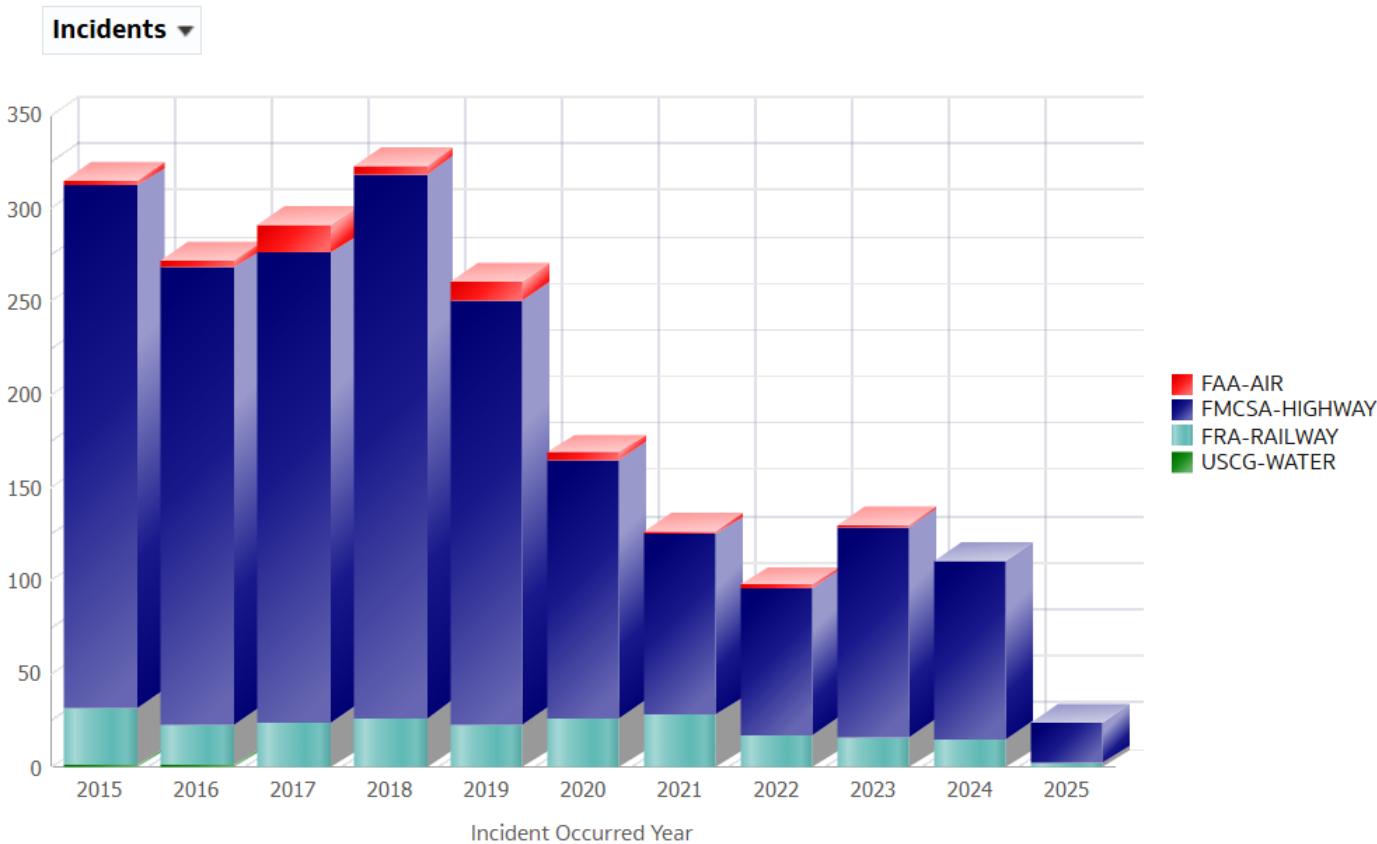




Figure 3-26 Hazardous Materials Transportation Incidents by Year 2015 – 2025 (U.S. Dept. of Transportation PHMSA)

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Hazardous Material Safety
Vehicular Accident / Derailment Incidents

Select chart measure:



Previous Occurrences

Element B1-d. Does the plan include the history of previous hazard events for each identified hazard?

During the 10-year period between January 1, 2015, and December 31, 2024, Stillwater experienced 19 hazardous materials incidents, as recorded in the U.S. Coast Guard National Response Center database. These incidents are categorized by type and listed below in Table 3-45.



Table 3-45 Incidents in Stillwater by Type 2015 to 2024

Type of Incident	Number of Incidents	Percentage by Type
Fixed Site (e.g. Incident at a building)	12	63
Continuous Release	0	0
Storage Tank, Drilling Platform, or Pipeline	3	16
Unknown Sheen on Water	0	0
Mobile Vehicle (Plane, truck, train, ship, etc.)	4	21
Other or Unknown	0	0
TOTAL	19	100

City officials have noted a few, spotty incidents that have been discussed during the planning process for the development of this plan that have occurred since the development of the last HMP update. Such incidents include:

- A crude oil line between 12th Street and 13th Street produced a leak. City officials were alerted, which prompted identification and flagging the operator.
- Another crude oil line underneath the road on McElroy near the Credit Union also produced a leak, which prompted similar response actions. This line was found to be old and brittle, which led to crude oil and saltwater leaking up through the road, which caused a concern due to its proximity to a waterway drainage system.
- A 50 – 100 gallon leak from a gasoline truck spilled onto the ground at a gas station.

Probability of Future Events

Element B1-e. Does the plan include the probability of future events for each identified hazard, including the type, location and range of anticipated intensities?

Based on the categorizations defined in Table 3-3, and the occurrence of 19 hazardous materials releases in the planning area between 2015 and 2024, the probability of this hazard has been rated as **Highly Likely**.

More details on the factors that must be considered for future occurrences of this hazard are discussed further in the next section, within the sub header titled “Impact Effects due to Climatological Change, Land Use Development, and Changes in Population Patterns.”

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Vulnerability and Impact

Element B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?

Element B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?

Table 3-46 Vulnerability and Impact to Hazardous Materials in the City of Stillwater

Vulnerability	Impact
Hazardous Materials incidents and releases may, and often do, occur with little to no advance warning, and may be subtle enough to go unnoticed if local authorities are not alerted.	Risks to people in affected areas hold the potential to catch them off guard, and so quickly that they do not have time to prepare. Due to the nature of sudden occurrences, the risks to health and well-being of these people may affect them before they have time to take the necessary actions to protect themselves and those nearby. Further, unreported incidents may be just as, or more, dangerous, since people in the affected areas may have increased and prolonged exposure to the hazardous material without knowing it.
A significant portion of City of Stillwater residents rely on outdoor warning sirens and devices as their primary source of warning notifications.	While being indoors may offer some level of protection to, or a delay in the onset of, the effects of the hazardous materials incident, residents who do not receive timely warning information from a variety of sources face a risk to their health and well-being, and potentially their lives.

Impact Effects Due to Climatological Change, Land Use Development, and Changes in Population Patterns

Climatological Changes

Despite its classification as a manmade hazard, or one of anthropogenic origin, a relationship between hazardous materials and climatological changes has been observed, particularly in effects associated with airborne hazardous materials.

As discussed by the Southern Climate Impacts Planning Program (SCIPP) in their Simple Planning Tool for Oklahoma under the Poor Air Quality discussion, dramatic improvements in air quality have occurred over the past half-century due to technological innovations and federal regulations, and continued technological innovation and enforcement of federal regulations should result in additional air quality improvement (ODEQ 2018). However, the projected increased frequency and intensity of droughts will make it easier for dry soil to become airborne, which can lower air quality and cause breathing and visibility problems (EPA 2016a). Hotter temperatures can increase the formation of ground-level ozone, which has a variety of health effects including asthma and respiratory problems. Air quality may also worsen during wildfire periods (EPA 2016b).

Airborne hazardous materials releases will share similar impacts as those discussed for dry soil being stirred and becoming airborne during droughts, ground-level ozone, and air quality during wildfires. Impacts from hazardous materials events which become airborne can be similar for the purposes of this discussion.



Land Use Development

Levels of vulnerability and impact to existing and future development are dependent upon building materials and methods used in the construction of structures, their location relative to hazardous materials incidents, and the magnitude of the event. Locations of critical facilities across the City, as well as the primary thoroughfares that host vehicles which carry hazardous materials are depicted in Figure 3-28. Additionally, Tier II facilities within the City of Stillwater are depicted in Figure 3-25.

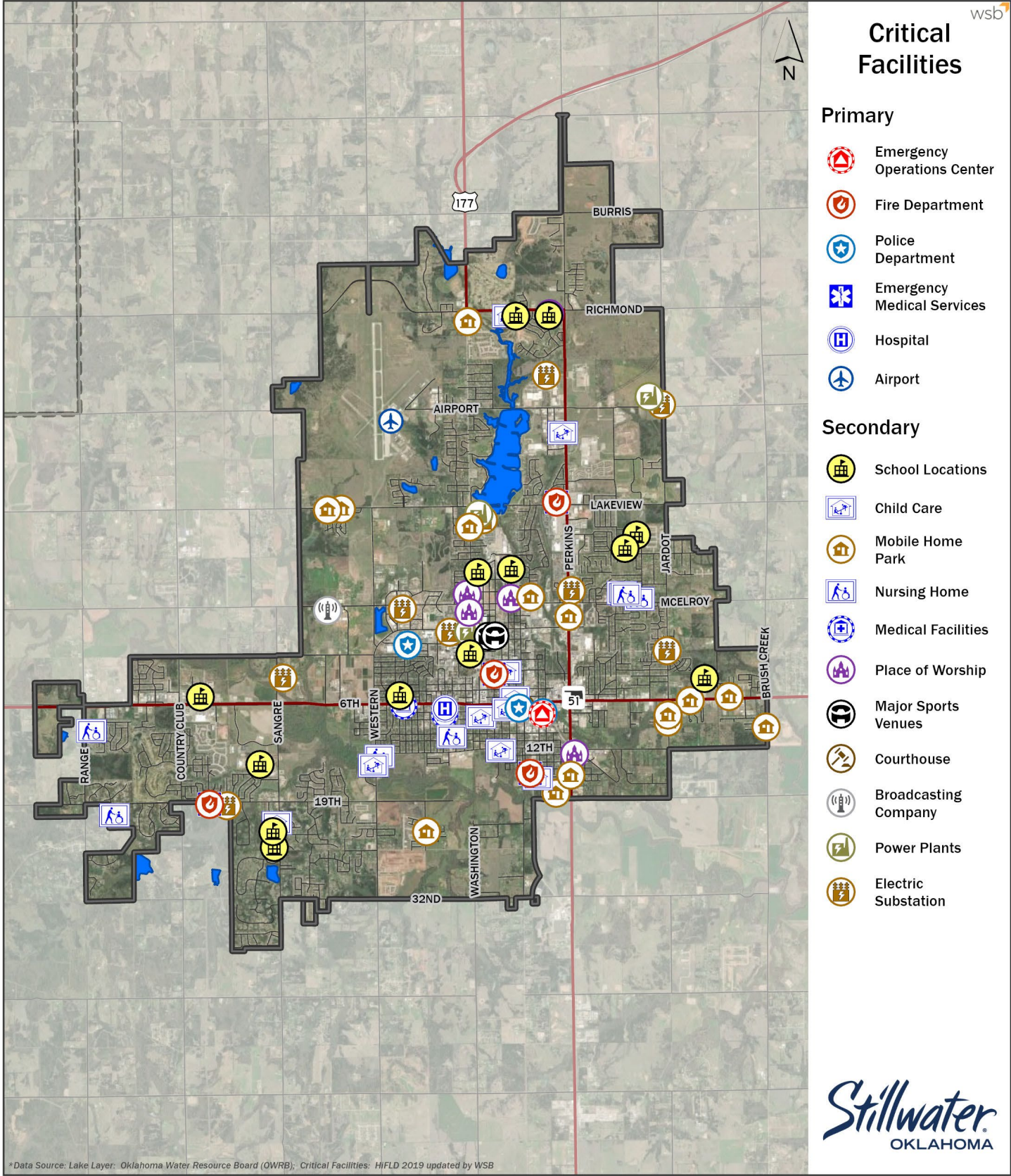
Care must be taken in planning future development, including zoning and development of transportation infrastructure, so that the impacts of future hazardous materials incidents are minimized.

Population Patterns

Changes in population that take place after the approval of this plan may expose at least a portion, if not all, people in the City of Stillwater to the risks associated with hazardous materials incidents. Those at greatest risk are residents and school staff and students in closest proximity to Tier II facilities and those proximal to primary transportation corridors that host vehicles which carry hazardous materials, including highways and railways.



Figure 3-28 Critical Facilities Within the City of Stillwater





3.5. Repetitive and Severe Repetitive Loss Structures in Planning Area

Element B2-c. Does the plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods?

FEMA defines a repetitive loss (RL) structure as one that is insured by the NFIP and has had at least two paid flood losses of more than \$1,000 in any 10-year period since 1978³⁹. A severe repetitive loss (SRL) structure is defined as an NFIP-insured property, regardless of ownership, which meets at least one of the following paid flood loss criteria since 1978:

- Has incurred flood-related damage for which four or more separate claims payments have been made, with the amount of each claim (including building and contents payments) exceeding \$5,000, and with the cumulative amount of such claims payments exceeding \$20,000; or
- For which at least two separate claims payments (building payments only) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the building.

Stillwater has 3 Repetitive Loss properties, all of which are classified as “Residential”. These properties are listed in Table 3-47.

City officials note that of two Severe Repetitive Loss properties located in the floodway, one has been acquired. Several other RL properties in floodways have also been identified. Officials also have stated that implementing gauges on creeks across the City is a high priority pursuit for flood mitigation.

Table 3-47 Repetitive Loss Properties by Parcel Type in Stillwater

Parcel Type	Count
Agriculture Improved	0
Exempt	0
Commercial	0
Residential	3

³⁹ <https://www.fema.gov/about/glossary/repetitive-loss-structure>



Chapter 4 CAPABILITIES

ASSESSMENT AND MITIGATION

STRATEGY

Summary of Changes

Changes in this chapter include:

- Capability Assessment moved to the chapter after hazard profiles and combined with Mitigation Goals and Mitigation Action Items
- Standalone sections discussing NFIP participation and the implementation of Substantial Improvement/Substantial Damage provisions of floodplain ordinance(s) created

4.1. Capabilities Assessment

Element C1-a. Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations?

A variety of actions to prevent or mitigate the impacts of natural disasters can be taken by the City of Stillwater. Such actions range from instituting regulatory measures (e.g., building and zoning codes) and establishing Emergency Operations Plans (EOP) and Emergency Operations Centers (EOC), to purchasing fire trucks and ambulances and constructing large and small infrastructure projects like levees and safe rooms. The City of Stillwater has already made considerable investments in these critical areas. The sections that follow in this Chapter survey the regulations, plans and infrastructure in place for avoiding or mitigating the impacts of natural hazards.

Numerous stakeholders from the City and neighboring communities, tribes, counties, agencies and non-profit organizations were included to assess what information they had, including studies, plans, documents, or other literature pertinent to community resilience that would affect and/or support Stillwater's Hazard Mitigation Plan. In addition to local capabilities, there are several national hazard mitigation programs developed by FEMA and other agencies that are designed to help communities organize their mitigation activities. This section and its subsections examines Stillwater's participation and progress in these programs.

Types of Capabilities

Capabilities which can reduce a community's long-term vulnerability to hazards through mitigation planning and activities have been broken down into four categories in this plan:

- Planning and Regulatory
- Administrative and Technical
- Financial
- Education and Outreach



4.1.1. Planning and Regulatory Capabilities

Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development. Examples of planning capabilities that can either enable or inhibit mitigation include comprehensive land use plans, capital improvements programs, transportation plans, small area development plans, disaster recovery and reconstruction plans, and emergency preparedness and response plans.

Table 4-1 Authorities of the City of Stillwater to Implement Regulatory Tools

City of Stillwater	Planning/Regulatory Mechanism
✓	Comprehensive Plan
✓	Capital Improvement Plan
✓	Economic Development
✓	Emergency Operations Plan
	Continuity of Operations Plan
✓	Transportation Plan
✓	Stormwater Management
✓	High Hazard Potential Dam EAPs
✓	Debris Removal Plan
✓	Repetitive Loss/Open Space Preservation Plan
✓	2018 ICC Building Code Adopted and Implemented
✓	Zoning Ordinance(s)
✓	NFIP-compliant Floodplain Ordinance(s)
✓	Flood Insurance Rate Maps
✓	Snow and Ice Removal Plan(s)

Comprehensive Plan

Stillwater's C³ *Comprehensive Plan 2030* was adopted in 2013 and lays out the policies and long-range land use goals for the City of Stillwater. The Plan also incorporates and references the City's Hazard Mitigation Plan in Chapter 7 and discusses stormwater management as well as other environmental considerations for future development. Stillwater's Planning Department, on behalf of the Planning Commission, maintains the plan, and it has been made publicly available for review and download here: <https://stillwaterok.gov/719/Master-Plans>.



At the time of this plan's development, a new comprehensive plan designed to replace this plan and extend the City's future land use planning through 2045 is concurrently in development. It is called Envision Stillwater and is garnering public feedback as of April 2025.

Capital Improvements Plan

A 5-year plan which directs development and improvement projects within the City, Stillwater's Capital Improvement Plan (CIP) uses creative approaches and community input to develop projects that move Stillwater forward. It focuses on addressing the community's infrastructure needs, including:

- Streets and stormwater drainage
- Parks, trails, and open spaces
- City buildings, such as City Hall, community centers, fire stations, and the Library
- Water, wastewater, and electric utilities
- Technology and public safety radio system upgrades.

A similarly wide range of funding mechanisms are available to fund CIP projects.

Economic Development

Stillwater's Economic Development Plan, and activities conducted as a part of it, are contracted through the Stillwater Chamber of Commerce. Set up to represent the strategic partnership between the City of Stillwater and the Stillwater Chamber of Commerce for economic development efforts, the Stillwater Economic Development Authority (SEDA) is designed to drive economic growth and community investment.

Tax Increment Financing

TIFs can be used to improve infrastructure or services within a defined area, promoting the viability of existing and new enterprises. As identified in the Grow Stillwater Economic Development Brochure, the City has three active TIF districts: North Perkins, West 51, and Stillwater (Re)Investment Plan. More information on economic development in Stillwater can be found here:

<https://stillwaterok.gov/317/Economic-Development>.

Emergency Operations Plan

Updated biannually, maintenance of the City's EOP is performed through Stillwater Emergency Management Agency (SEMA).

Continuity of Operations Plan

City departments are individually responsible for creating and maintaining their own Continuity of Operations Plan (COOP). Some departments have them and others do not. As such, a formal, unified COOP across all departments for the City does not exist at the time of the development of this plan.

Development of such a plan was started in 2020, prior to the disruption that was caused by the COVID pandemic, which caused the plan to be deprioritized. City officials indicate a continued interest, however, in developing a formal plan to unify all departmental plans into one, central document.

Transportation Plan

A plan which developed recommended transportation improvements for the City based on land uses, demographics, and the existing system, the Stillwater Transportation Enhancement Plan (STEP) produced goals and objectives related to the City's right-of-way, automobile, transit, bicycle, and pedestrian infrastructure. It also provides a functional classification system for roadways within Stillwater.



Stormwater Management

Stormwater Services, within Stillwater's Engineering Department, is responsible for the City's stormwater drainage infrastructure. One of their primary functions is to maintain compliance with Oklahoma's Phase II Stormwater Program. <https://stillwaterok.gov/419/Engineering>

Debris Removal Plan

City officials indicate the existence of a Debris Removal Plan. It was developed in response to the unseasonably early ice storm experienced in October 2020, which downed several tree limbs and necessitated a plan for transporting them for disposal. This plan is intended to be updated by the time the planning process for the next update for the City's Hazard Mitigation Plan begins.

Other Planning Mechanisms

Additional planning mechanisms possessed by the City that can be integrated with hazard mitigation planning and activities include:

- Annexation Plan
- Master Drainage Plans
- Master Park and Community Resources Plan
- Master Plans⁴⁰ – Plans which outline an approach to how streets, parks, buildings, facilities, and more are developed in the City.
- Watershed Management Plan
- Strategic Plan
- Transportation Enhancement Plan

Building Codes, Permitting, and Inspections

Stillwater has adopted and currently implements the 2018 ICC Building Code standard.

BCEGS Score

Stillwater's most recent BCEGS evaluation was conducted in 2016, where they were awarded a BCEGS score by ISO of 9.

ISO Fire Rating

Stillwater Fire Department has earned an ISO Rating of 2. Stillwater Fire Department has continued to maintain a high ISO rating for their fire suppression capabilities, and this rating remains unchanged from the rating maintained when the 2020 HMP was developed.

Site Plan Review Requirements

Site Plan Review Requirements: Site plans are reviewed for drainage when impacting a floodplain.

Zoning, Subdivision, and Floodplain Ordinances

Zoning

Stillwater's zoning ordinances are located in Chapter 23 of the City's municipal code. Land use classifications do not directly address natural hazards.

Landscaping, Screening, and Environmental Hazards

Stillwater requires minimum planting, in part, to mitigate runoff and the urban heat island effect.

⁴⁰ <https://stillwaterok.gov/719/Master-Plans>



Subdivision

Stillwater's subdivision regulations require that the floodplain be delineated. Drainage and stormwater infrastructure easements are also required.

Floodplain

Stillwater's floodplain ordinance, mandatory as part of NFIP participation, contains a variety of requirements ranging from freeboard to compensatory storage. More information on this in Section 4.2 and Appendix B.

Flood Insurance Rate Maps (FIRMs)

Floodplains representing the 1% annual chance (or 100-year) locations which may experience flooding identified by FEMA have been adopted by the City as their regulatory floodplains.

Open Space Preservation

As a part of the City's CRS program, Stillwater maintains a map of open space areas across the City preserved for floodplain management and public use/recreation. Open space preservation has been codified into the City of Stillwater's Code of Ordinances in Ordinance Number 3023 § 23-231 – Environmental Standards.

4.1.2. Administrative, Personnel and Technical Capabilities

Administrative and technical capability refers to the community's staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively.

Table 4-2 Administrative and Technical Capabilities in the City of Stillwater

City of Stillwater	Administrative/Technical Capability
✓	Planning Commission
✓	Mitigation Planning Committee
✓	Risk-Reduction Maintenance Programs
✓	Mutual Aid Agreements
✓	Chief Building Official
✓	Floodplain Administrator
✓	Emergency Manager
✓	Community Planner(s)
✓	Civil Engineer(s)
✓	GIS Coordinator
✓	Public Warning Systems/Services



City of Stillwater	Administrative/Technical Capability
✓	Public Hazard Data & Information
✓	Grant Writer(s)

Administrative

Planning Commission

Stillwater's Planning Commission is tasked with promoting an orderly and efficient arrangement of land use projects. Its primary function is to recommend boundaries and regulations for the zoning districts, as well as provide recommendations related to the subdivision of land.

Mitigation Planning Committee

Stillwater's Mitigation Planning Committee was formed to facilitate the development of this plan.

Risk Reduction Maintenance Programs

Drainage systems are maintained by the City's Stormwater Department, and known problem areas are checked after each significant rainfall event.

Mutual Aid Agreements

A statewide mutual aid compact is maintained and is one in which the City participates. This agreement automatically allows the City to provide to or request mutual aid from other jurisdictions in times of need.

Engineering Services

City Engineering is responsible for the design and construction of high-quality multi-modal transportation infrastructure. Stormwater Services is a division within the department that is responsible for a complementary stormwater system.

Grants

Stillwater has a Grants Division to assist with the procurement and administration of grants. The division oversees the City's annual CDBG process, which can be used as match for HMA grants.

Staff⁴¹

Chief Building Official

Serving as manager of the City's Developmental Service Department, this individual oversees Planning, Permits, Floodplain Management, GIS, and other services provided by the City.

Floodplain Administrator

Stillwater's floodplain management regulations state that an application for permits for all development within the floodplain is required and are reviewed by the Floodplain Administrator. A Certified Floodplain Manager (CFM), recognized by Oklahoma Floodplain Managers Association (OFMA) and the Association of State Floodplain Managers (ASFPM), is hired by the City and tasked with administering the floodplain management program. In order to maintain this certification, CFMs are required to complete a certain

⁴¹ All staff listed are full-time employees of the City of Stillwater



number of continuing education credits annually. These credits are then put to practical use in enhancing the City's floodplain management practices.

Emergency Manager

Stillwater Emergency Management Agency (SEMA) is supervised by an Emergency Management Director, who directs plans for all hazards, works to reduce threats, and prepares Stillwater residents and organizations to respond to and recover from any emergency, natural, technological, or manmade.

Community Planner

Stillwater's planning team prepares a variety of long-range master plans as well as administers land development standards. The Planning team provides support to the planning commission.

GIS Coordinator

Stillwater's GIS group provides online access to an array of City maps available to the public.

Technical

Public Warning Systems and Services

SEMA operates the City's and OSU's outdoor warning sirens. In addition, SEMA uses social media and the Be Informed Stillwater mass notification system to distribute messages during emergencies. Barricades, signs, and PA systems may be used during emergencies for area specific warnings. Locations of outdoor warning sirens and devices to alert people of emergencies and impending threats from natural hazards are depicted in Figure 4-1.

Hazard Data and Information

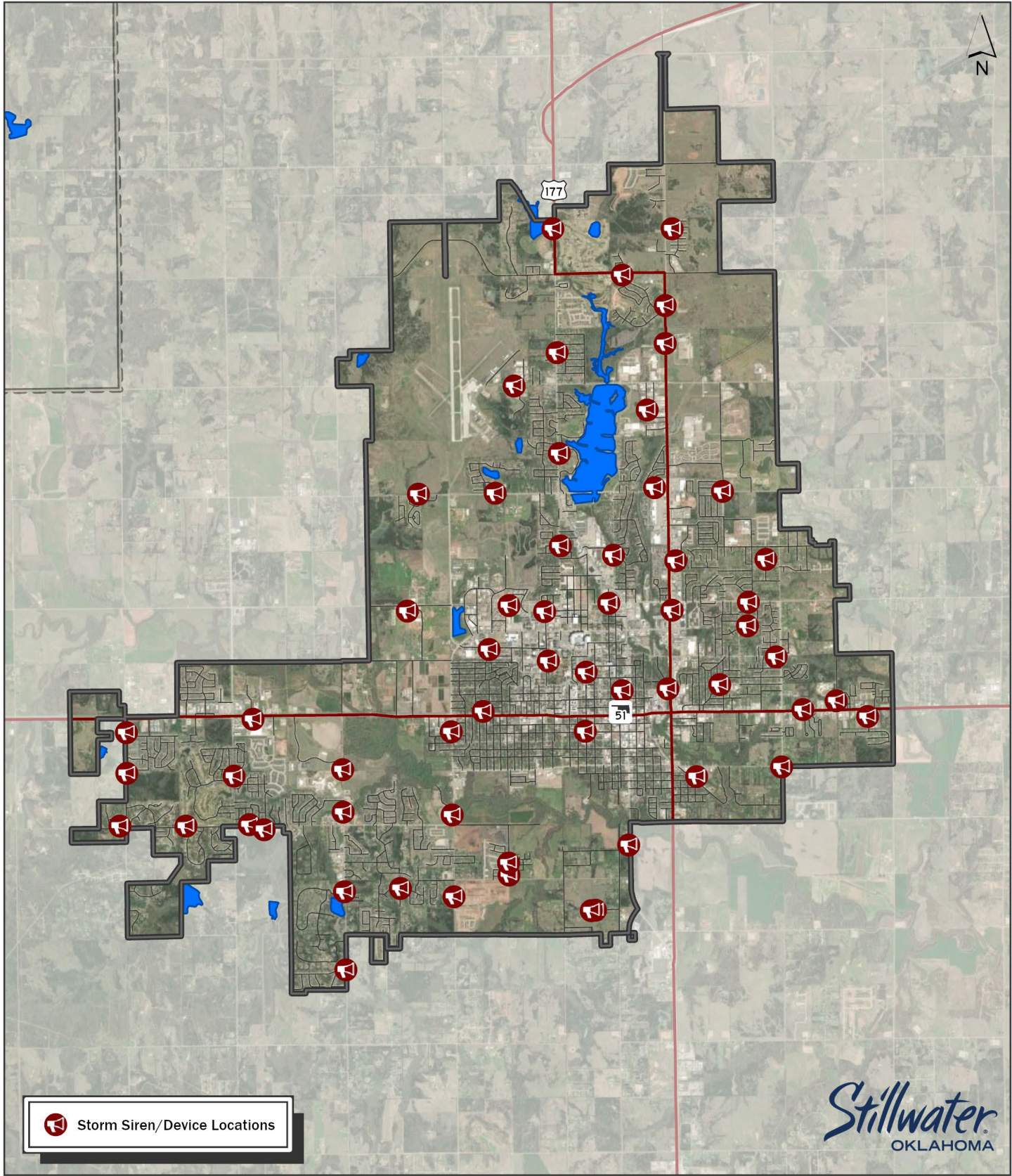
Contained within this document is extensive data and information on all hazards affecting the community. Hazard data is also maintained in GIS format. Most mitigation measures in the plan are being implemented.

Grant Writing

As a part of the duties of the Grants division discussed previously, the City has some grant writing capabilities and has been successful in obtaining FEMA Hazard Mitigation Assistance Grants in the past.



Figure 4-1 Locations of Outdoor Warning Sirens/Devices Across Stillwater





Additional Administrative, Personnel, and Technical Capabilities

Additional capabilities that fit under the umbrella of those discussed in this section are those that have been identified in the City's response to the March 2025 wildfire event. Specifically, the City's website continues to maintain a page with information for residents who were affected by those fires, including links to City resources, local VOADs, disaster resources available through the U.S. Small Business Administration (SBA), information on demolition and cleanup, donation/volunteer information, emergency contacts, and a list of updates posted during the event. This website can be found at the following URL throughout the duration of the recovery from this event: <https://stillwaterok.gov/872/Wildfire-Response-and-Recovery>.

4.1.3. Financial Capabilities

Financial capabilities are the resources a jurisdiction has access to or is eligible to use to fund mitigation actions. The costs associated with implementing mitigation activities vary. Some mitigation actions such as building assessment or outreach efforts require little to no costs other than staff time and existing operating budgets. Other actions, such as the acquisition of flood-prone properties, could require a substantial monetary commitment from local, State, and Federal funding sources.

Some local governments may have access to a recurring source of revenue beyond property, sales, and income taxes, such as stormwater utility or development impact fees. These communities may be able to use the funds to support local mitigation efforts independently or as the local match or cost-share often required for grant funding.

Table 4-3 Metrics of Financial Capability by Jurisdiction

City of Stillwater	Funding Mechanism
✓	Capital Improvement Project Funding
✓	Tax Increment Finance (TIF) Districts
✓	Transportation Improvement Fund
✓	Utility Fees
✓	New Development Impact Fees
✓	Stormwater Utility Fee
✓	Incur Debt Through General Obligation or Special Tax Bonds
✓	Community Development Block Grant
✓	Hazard Mitigation Grant Program
✓	Federal Highway Administration Funding
✓	Oklahoma Water Resource Board Loans
✓	State Funding Programs



Among the sources of funding at the City's disposal, and those that have been awarded in the past, include receipt and use of 406 Mitigation funding to address four mitigation action items that were identified after the 2019 flooding event.

Table 4-4 Sources of External Funding and Intended Uses

Possible Funding Sources	Uses
Capital Improvements Program (CIP)	Used for various infrastructure projects throughout the state and participating communities
Incur debt through General Obligation or special tax bonds	Funding specifically identified projects
Tax Increment Finance (TIF) Districts	Publicly finance necessary structural improvements and enhanced infrastructure within a defined area in the City.
Community Development Block Grant (CDBG)	Used to enhance infrastructure, public facilities, economic development projects, housing rehabilitation projects, and more in low to moderate-income areas
Hazard Mitigation Grant Program (HMGP)*	Post-disaster rebuilding to include mitigation measures aimed at reducing loss of life and property from future disasters
Flood Mitigation Assistance (FMA)*	Projects that reduce or eliminate the risk of repetitive flood damage to NFIP-insured structures
Pre-Disaster Mitigation (PDM)*	Sustainable cost-effective projects are designed to reduce the risk to individuals and property from future natural hazards, while also reducing reliance on federal funding for future disasters.
Federal Highway Administration (FHWA) Funding	FHWA funding is used for eligible transportation projects
Safeguarding Tomorrow Revolving Loan Fund*	Projects that reduce disaster risks for homeowners, businesses, nonprofit organizations, and communities to help them build climate resilience
Emergency Management Performance Grant (EMPG)	Projects that develop emergency management capabilities and provide resources required for the implementation of the National Preparedness System, which outlines an organized process for everyone in the whole community to move forward with their preparedness activities and achieve the National Preparedness Goal.



Possible Funding Sources	Uses
Federal, State, and County Highway, Roads, and Bridges funds	Projects which build, maintain, repair, and improve upon roadways within the planning area
Oklahoma Water Resources Board	OWRB loans are used for water and wastewater projects.

* Requires adoption of a FEMA-approved hazard mitigation plan

4.1.4. Education and Outreach Capabilities

This type of capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Table 4-5 Education and Outreach Capabilities by Jurisdiction

City of Stillwater	Public Education/Outreach Capability
✓	Local citizen groups/Non-profit organizations willing to assist with mitigation activities
✓	Public education or information programs
✓	StormReady Certification
	FireWise Certification
✓	Public-private partnership initiatives addressing disaster-related issues

Local Citizen Groups/Non-profit Organizations

Providing volunteer services, shelter, and food during disaster recovery, the Northern Oklahoma Chapter of the American Red Cross has an office in Stillwater. Other services they provide include education and public outreach material on safety, as well as training and certification for first aid, CPR, AED, lifeguarding, and other trainings.

Public Education/Information Programs

Education and information programs utilized by the City of Stillwater to interact with residents include:

- Citizen Preparedness page on City of Stillwater website.
- “Touch a Truck” events, which allow the public to interact with emergency equipment and personnel

Natural Disaster-Related Community Initiatives and Certifications

StormReady

Stillwater is one of 58 communities in Oklahoma which has received the StormReady certification.

StormReady is a program which provides assistance to communities and institutions across the United States with communication and safety skills needed to save lives and property – before, during, and after the event. Such skills help community leaders and emergency managers strengthen local safety programs.



Firewise

Stillwater was Firewise certified at the time the 2020 HMP was developed, however the City’s certification has lapsed since then. Local officials state that they intend to seek to recertify after their new cycle begins, which will occur soon.

Public-Private Partnerships

Payne County hosts a Local Emergency Planning Committee (LEPC), which is comprised of local industry and City officials. This committee was active and posted agendas between 2020 and 2023, but no activity has been posted on their website for 2024 or 2025 to date.

A Community Emergency Response Team (CERT) has been developed in Stillwater. This group comprises more than 20 volunteers including firefighters, reservists, building maintenance supervisors, school teachers, dispatchers, and retirees. These volunteers donate their time and resources to spot storms, staff barricades, and assist with Stillwater’s special events. This team meets monthly and trains new volunteers on a regular basis in order to provide the most efficient support to SEMA.

Other Public Engagement Activities

Annually, Stillwater’s Trash-Off functions as a community service opportunity that typically attracts student groups and other organizations that perform such acts. This event is formatted as a competition, and the organization that collects the most trash is presented with an award. All participants are eligible to receive verified community service hours. Trash, including those that litter local streams and stormwater drainage channels and infrastructure, is collected, which further reduces hazard risk to flooding during and after periods of heavy rainfall.

4.1.5. Opportunities to Build on Existing Capabilities

Element C1-b. Does the plan describe each participant’s ability to expand and improve the identified capabilities to achieve mitigation?

Opportunities for the City of Stillwater to expand on its existing capabilities are listed in Table 4-6. Additional opportunities to expand or improve on capabilities identified for each have been included as mitigation action items in Section 4.5.

Table 4-6 Ability to Expand on Existing Capabilities

Capability/Capability Gap	Ability to Expand/Improve
City of Stillwater	
	• A secure and continually available source of funding for hazard mitigation projects
	• Develop a unified Continuity of Operations Plan (COOP)



4.2. NFIP Participation

Element C2-a. Does the plan contain a narrative description or a table/list of their (NFIP) participation activities?

Residents within the City of Stillwater are eligible to purchase federally-backed flood insurance through the National Flood Insurance Program (NFIP) by virtue of the City’s participation in this program beginning in 1973. In addition, residents who do so will enjoy a 15% discount on their policy premium thanks to the City going above and beyond the minimum requirements of the NFIP and participating in the Community Rating System within the NFIP. More details on this program are discussed in the next section.

Continued participation in the NFIP means that communities must demonstrate that they meet the program’s minimum requirements, including enforcement of regulatory floodplain ordinances which should be designed to limit development within the community’s floodplains. Such ordinances include language regarding flood protection, flood proofing, compensatory storage design, and substantial damage/improvement. Floodplain requirements are enforced when existing structures are substantially improved or substantially damaged. Stillwater’s Floodplain Administrator oversees the City’s continued compliance with NFIP requirements and works with other City officials as needed to ensure those requirements continue to be met. More discussion on substantial damage/improvement is located in Section 4.3.

Details on Stillwater’s NFIP and CRS participation are listed in Table 4-7.

Table 4-7 NFIP and CRS Participation Details

Participating Jurisdiction	CID	Effective Map Date	CRS Participation	Policies in Force	Total \$ Coverage
City of Stillwater	405380	5/16/2007	Yes	94	\$21,809,000

Stormwater Detention

One way to avoid increased flooding downstream from new development is to provide stormwater detention basins throughout each watershed. New or substantially improved developments must detain the excess stormwater on site – unless they are exempted in master plans or allowed to pay a fee in lieu of on-site detention. Water from detention basins is slowly released to areas downstream along the channel.

In Stillwater, officials indicate there are a few regional detention facilities maintained by the City, but there is little space available for additional detention facilities, aside from consolidating some park locations or some others that are being considered in City discussions. As such, City Council has placed a hold on their policy of accepting a fee in lieu of detention for new development and placing the burden of responsibility for detention on developers.

Comprehensive or Valley Storage

Floodwater cannot be compressed and attempts to do so will result in flooding. Encroachments into a channel or floodway can displace floodwaters and cause those water levels to be higher in similar future flooding events. Thus, Stillwater requires compensatory excavation for such encroachments that would reduce the ability of that channel to convey floodwater downstream.



Freeboard

NFIP regulations require the finished floor of structures in new or substantially damaged/improved development to be at or above the predetermined base flood elevation (BFE), based on existing watershed conditions.

Stillwater includes freeboard as another measure to maintain safety standards to protect new development from being damaged by flooding by requiring the finished floor to be at least 1 foot above the BFE. Non-residential structures can either build to this standard or be floodproofed to this level.

Erosion and Sedimentation

Erosion and sedimentation rob hillsides of valuable topsoil, dam lowlands, clog streams, and pollute rivers. Builders must control site erosion from new development and must obtain an Earth Change, Grading, and Floodplain Development Permit from the City of Stillwater.

Permits and Performance Standards

An Earth Change, Grading, and Floodplain Development Permit is required for all activities classified under developing, redeveloping, building, excavating, grading, regrading, paving, landfilling, berming, diking, or any disturbing of the land within the FEMA Special Flood Hazard Area (SFHA). Additionally, the developer must produce a drainage plan and drainage study for any new development to demonstrate that no increase in peak stormwater flows will result from the permitted activities.

Community Rating System (CRS)

NFIP's Community Rating System is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of NFIP. Residents of communities who elect to participate in CRS are rewarded with policy discounts on their NFIP flood insurance policies. This discount structure is shown in Table 4-8.

Table 4-8 CRS Classification Structure

CRS Level	Credit Points	Policy Discount
Class 1	4500+	45%
Class 2	4000-4499	40%
Class 3	3500-3999	35%
Class 4	3000-3499	30%
Class 5	2500-2999	25%
Class 6	2000-2499	20%
Class 7	1500-1999	15%
Class 8	1000-1499	10%
Class 9	500-999	5%
Class 10	0-499	0%

CRS has 19 activities, each with between one and thirteen elements which provide credit points. Participating communities are organized into classes from 1 to 10, with 1 being the highest possible rating. The system is stratified into 500-point increments for each class.

As mentioned previously, Stillwater participates in the CRS program and has earned a standing as a Class 7 community. As a part of Activity 510 Floodplain Management Planning of the CRS program, this hazard mitigation plan complies with the requirements of this activity, and the City can seek to request credit for this activity during each recertification and reverification throughout the life cycle of this plan. In 2021, the City passed its most recent reverification crosswalk with 1,660 points, and the next one will be conducted in 2026.

Flood and Stormwater Management

Stillwater has a long history of battling the effects of flooding. In response, the City of Stillwater regulates development to a higher standard in order to reduce future flood losses. As a minimum standard, the SFHA, also referred to as the 100-year

or 1% annual chance floodplain, is an area that has been statistically calculated to have a 1% chance of experiencing flooding conditions in any given year. FEMA designates SFHA floodplains on their Flood



Insurance Rate Maps (FIRMs) for use in assessing flood risk to set premiums for NFIP policies. NFIP's minimum national standard is identified by the SFHA, which reflects the conditions of development at the time of the study and typically ends where the contributing drainage area is one square mile.

In light of heightened awareness of flooding in the City that occurs outside of the SFHA, Stillwater has embarked on a multi-year project deemed the Stillwater Creek Watershed Master Plan. As a part of this plan, the City is pursuing master drainage plan studies to gain a better understanding of why flooding may occur in the City's watersheds, including the Boomer Creek Watershed, for which a master drainage plan was recently completed.

Once this Master Plan is completed, it will allow the city to develop a comprehensive set of flood mitigation actions and other preventative measures to maintain the integrity of the overall system, inform the public of the current flood hazard, and to correct existing and prevent future flooding problems.

Currently, the City enforces the FEMA-defined SFHA through its development permit, which has been referred to previously and is called the Earth Change, Grading, and Floodplain Development Permit. This permit requires drainage studies and a drainage plan when development that may increase peak stormwater flows will result from the permitted activities is expected to occur. Most SFHAs have a floodway, which is generally the central section of a watercourse in which floodwaters are conveyed in a channel, and where these waters tend to flow faster and more deeply. In Zones A and AE, the City of Stillwater mandates that no development shall cause a rise in peak stormwater flows and requires both upstream detention of excess flows and compensatory storage to mitigate flooding.

In January 1968, a Storm Drain Plan was prepared which outlined many storm sewer improvement and storm drain line improvements. Most of the open channel recommendations were concrete-lined, or gray infrastructure, and several of those were implemented. In May 2003, the City adopted a Stormwater Management Plan that was based on current (at the time) HEC-RAS models obtained by the NFIP. Those improvements were, however, not implemented.

4.3. Implementation of Substantial Improvement/Damage Provisions

Element C2-a. Does the plan contain a narrative description or a table/list of their (NFIP) participation activities?

Substantial damage, as defined by FEMA, refers to damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged conditions would equal or exceed 50 percent of the market value of the structure before the damage occurred.⁴²

Substantial improvement, as defined by FEMA, refers to any construction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This includes structures that have incurred substantial damage, regardless of the actual repair work performed. This does not, however, include any project: 1) for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by a local code enforcement official, and which are the minimum

⁴² <https://www.ecfr.gov/current/title-44/chapter-I/subchapter-B/part-59>



necessary to assure safe living conditions, or 2) any alteration of a “historic structure”, provided that the alteration will not preclude the structure’s continued designation as a “historic structure.”

A designated local official, usually an assessor, building official, or floodplain manager, is responsible for determining properties with substantial damage or improvement. Federal statute 44 CFR § 60.3 and Oklahoma statute Title 82, OK Stat § 1608 (2022) require all NFIP participating communities to adopt floodplain regulations to include substantial damage/improvement.

When an event results in substantial damage, floodplain managers in NFIP-participating jurisdictions will comply with all required ordinances to enact the substantial damage/improvement provisions of floodplain management regulations.

Encoded within the City of Stillwater’s floodplain ordinances are measures intended to outline how the City implements substantial improvement provisions, both in response to substantial damage and for other construction and development. Sections within each of these ordinances are specified below:

- **Section 23-373 (a) (8)** states that the City’s Floodplain Administrator must require that no new substantial improvement shall be permitted within zones A1-30 and AE on the community’s FIRM unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood.
- **Sec 23-373 (a) (10)** states that after a disaster or other type of damage occurrence to structure in the city, determination must be made as to whether residential, nonresidential structures, and manufactured homes have been substantially damaged and enforce the substantial improvement requirement.
- **Sec 23-373 (b) (1)** states that the elevation of the lowest floor of all new and substantially improved structures must be included in permit requirements.
- **Sec 23-374 (a)** outlines the following general standards for substantial improvements:
 - (1) All new construction, substantial improvements, or other development shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - (2) All new construction, substantial improvements, or other development shall be constructed by methods and practices that minimize flood damage;
 - (3) All new construction, substantial improvements, or other development shall be constructed with materials resistant to flood damage;
 - (4) All new construction, substantial improvements, or other development shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities located 12" above the base flood elevation so as to prevent water from entering or accumulating within the components during conditions of flooding;
 - (5) All new construction, substantial improvements, or other development shall be accomplished without causing an adverse impact to other properties.
- **Sec 23-374 (b)** outlines the following specific standards for substantial improvements where base flood elevation data has been provided as set forth in Sec 23-374 (c)(3), Sec 23-372 (b), or 23-373 (a)(8):
 - (1) *Residential construction.* New construction and substantial improvement of any residential structure shall have the lowest floor (including basement and electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities), elevated 12 inches above the base flood elevation.



A licensed professional engineer or land surveyor shall submit a certification to the floodplain administrator that the standard of this subsection, is satisfied.

(2) *Nonresidential construction.* New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated 12 inches above the base flood level as certified by a licensed professional engineer or land surveyor, or together with attendant utility and sanitary facilities, be designed so that below the elevation 12 inches above the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A licensed professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. The floodplain administrator shall maintain a record of all floodproofing certifications that includes the specific elevation (in relation to mean sea level) to which each structure has been floodproofed.

(3) *Enclosures.* New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a licensed professional engineer or architect or meet or exceed the following minimum criteria:

- a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
- b. The bottom of all openings shall be no higher than one foot above grade.
- c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(4) b. Manufactured homes that are placed or substantially improved within zones A1—30, AH, and AE on the FIRM shall be elevated on a permanent foundation such that bottom of the lowest structural support (I-beam), electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities of the manufacture home is elevated 12 inches above the base flood elevation as certified by a licensed professional engineer or land surveyor and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

- **Sec 23-374 (d)** establishes standards for substantial improvements in Zones AO and AH, where:
 - (1) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated 12 inches above the depth specified on the FIRM or 36 inches above the highest adjacent grade if no depth number is specified.
 - (2) All new construction and substantial improvements of nonresidential structures:
 - a. Have the lowest floor (including basement) elevated 12 inches above the depth specified on the FIRM or 36 inches above the highest adjacent grade if no depth number is specified; or
 - b. Together with attendant utility and sanitary facilities, shall be designed so that below the elevation 12 inches above the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.
- **Sec 23-374 (e)** establishes standards for substantial improvements in floodways, where:



- (1) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway except for:
 - a. Work for the purpose of constructing, repairing, or maintaining any street, utility facility including any service lines related thereto, or any recreational park facility which when completed results in no adverse impact; and
 - b. Maintenance of stormwater drainage facilities that does not diminish the design capacity of a drainage system.
- (2) Under the provisions of 44 CFR Ch. 1, § 65.12, of the National Flood Insurance regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the developer or community first obtains a conditional FIRM and floodway revision CLOMR through FEMA.
- (3) If subsection (e)(1) or (2) of this section is satisfied, all new construction and substantial improvements within the floodway shall comply with all applicable flood hazard reduction provisions of this section.

4.4. Mitigation Goals

Element C3-a. Does the plan include goals to reduce the risk from the hazards identified in the plan?

Mitigation goals from the 2020 Stillwater Multi-Jurisdictional Hazard Mitigation Plan Update were reviewed and evaluated based on both progress and actions taken in the plan maintenance period, and on development or review of other pertinent plans in the planning area. Goals that were deemed to be effective and pertinent to the current plan were retained and incorporated into the 2025 Update. All City goals were established using the national hazard mitigation strategies and goals set by the Oklahoma Department of Emergency Management and FEMA as their foundation.

Stillwater Mission Statement

It is the mission of the planning committee to create a dynamic plan that supports a proactive and resilient Stillwater community by preparing for the unexpected and reducing the impacts of hazards.

City of Stillwater Goals

Stillwater has sought out in this plan to achieve the goals of improved safety and well-being of people residing and working in Stillwater. These goals seek to reduce the potential of deaths, injuries, property damage, environmental, and other losses from natural and manmade hazards in a manner that creates disaster-resistant communities, enhances economic development opportunities, and produces a better quality of life, resulting in more livable, viable, and sustainable communities.

Goals for All Hazards

- Minimize loss of life and property from natural hazard events
- Protect public health and safety
- Increase public awareness of risk from natural hazards
- Identify hazards and assess risk for local area
- Ascertain historical incidence and frequency of occurrence
- Determine increased risk from specific hazards due to location and other factors
- Improve disaster prevention
- Improve forecasting of natural hazard events
- Limit building in high-risk areas
- Improve building construction to reduce the dangers of natural hazards



- Improve government and public response to natural hazard disasters
- Enhance City's capability to respond to disasters

4.4.1. Guiding Principles

To meet the planning area's mitigation goals and overall mission statement, mitigation actions area guided by several principles which are actionable components of the Mitigation Goals section of this plan. Not every mitigation action will meet all principles listed below, but each action will fill at least one.

- Minimize property loss/damage from natural hazard events
- Protect public health and safety
- Increase public awareness of risk from natural hazards
- Continue to assess and update hazard risk for local areas
- Improve forecasting of natural hazard events
- Improve building construction and enforce current building codes to reduce the dangers of natural hazards
- Improve governmental and public response to natural hazard disasters
- Limit or cease development in high risk areas
- Ensure that jurisdictions maintain NFIP participation, or make efforts to become involved in NFIP

4.4.2. Action Types

According to FEMA, a mitigation action is a policy, project, activity, or process taken to reduce or eliminate long-term risk to people, property, and the environment from hazards. Based on the guiding principles in the previous section, the types of mitigation actions reviewed to reduce long-term vulnerability include:

- Preventative Activities
- Floodplain Management Regulation
- Property Protection Activities
- Natural Resource Protection Activities
- Emergency Services Activities
- Structural Projects
- Public Information Activity

4.5. Action Items

Element C4-a. Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment?

Element C4-b. Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment?

Element C5-b. Does the plan provide the position, office, department, or agency responsible for implementing/administrating the identified mitigation actions, as well as potential funding sources and expected time frame?

A mitigation action, referred to in this plan as an action item, is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. A review of the 2020 mitigation actions was completed by the planning team and stakeholders. Each action was evaluated with the intent of carrying over those which were not started and those which are ongoing into this plan. Actions with the same or similar intent have been combined in an effort to streamline the ability for the City and identified agencies involved to act on them.



Action Item 1 Implement all-hazards public education initiative, with emphasis on reaching vulnerable and functional needs populations	
Hazard(s) Addressed	Dam Incident, Drought, Earthquake, Extreme Heat, Fire/Wildfire, Flood, Hail, Lightning, High Wind, Tornado, Severe Winter Storms/Extreme Cold, Expansive Soils, Hazardous Materials
Action Type	Public Information Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Provide the public with information on all hazards, mitigation, preparation, and response topics. Ensure that vulnerable and functional needs populations are reached.
Lead Agency	SEMA
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local

Action Item 2 Develop Emergency Response and Operations Procedures Plan	
Hazard(s) Addressed	Dam Incident, Drought, Earthquake, Extreme Heat, Fire/Wildfire, Flood, Hail, Lightning, High Wind, Tornado, Severe Winter Storms/Extreme Cold, Expansive Soils, Hazardous Materials
Action Type	Emergency Services Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Develop a coordinated Emergency Response and Operations Procedures Plan for the City of Stillwater
Lead Agency	SEMA
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local, HMGP



Action Item 3	Develop database of special needs populations
Hazard(s) Addressed	Dam Incident, Drought, Earthquake, Extreme Heat, Fire/Wildfire, Flood, Hail, Lightning, High Wind, Tornado, Severe Winter Storms/Extreme Cold, Expansive Soils, Hazardous Materials
Action Type	Preventative Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Work with agencies to identify vulnerable and special needs populations within the jurisdiction and develop a voluntary inventory of these special needs populations requiring special assistance in the event of a disaster.
Lead Agency	SEMA, Stillwater Health Department
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 4	Develop a Continuity of Operations Plan
Hazard(s) Addressed	Dam Incident, Drought, Earthquake, Extreme Heat, Fire/Wildfire, Flood, Hail, Lightning, High Wind, Tornado, Severe Winter Storms/Extreme Cold, Expansive Soils, Hazardous Materials
Action Type	Emergency Services Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Develop Continuity of Operations Plans (COOP) for the City of Stillwater and provide education opportunities on COOPs for interested parties.
Lead Agency	SEMA, Stillwater Chamber of Commerce, DRN
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMGP



Action Item 5	Obtain generators and ensure electrical reliability for critical facilities
Hazard(s) Addressed	Dam Incident, Earthquake, Extreme Heat, Fire/Wildfire, Flood, Lightning, High Wind, Tornado, Severe Winter Storms/Extreme Cold
Action Type	Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Install generators or provide wiring and transfer switches to accommodate emergency generators during power outages for critical facilities, lift stations, and structures used for emergency shelters.
Lead Agency	SEMA
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 6	Bury or harden municipal electrical utility infrastructure
Hazard(s) Addressed	Dam Incident, Earthquake, Fire/Wildfire, Flood, Lightning, High Wind, Tornado, Severe Winter Storms/Extreme Cold
Action Type	Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Continue to bury or harden municipal electrical power lines, with priority placed on feeders to critical facilities and secondary lines in neighborhoods containing mature trees
Lead Agency	Stillwater Electric Utility
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA



Action Item 7	Install redundant water supply line
Hazard(s) Addressed	Drought
Action Type	Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Plan, design, and install a parallel water supply line for the City of Stillwater.
Lead Agency	City of Stillwater Engineering, City of Stillwater Department of Utilities
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 8	Install safe rooms as needed and evaluate existing shelter spaces
Hazard(s) Addressed	Earthquake, High Wind, Tornado, Hazardous Materials
Action Type	Structural Project
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Install safe rooms in existing and new school and critical facilities and evaluate those which already exist.
Lead Agency	SEMA, City of Stillwater Engineering
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA



Action Item 9	Fortify public buildings and critical facilities
Hazard(s) Addressed	Earthquake, Hail, High Wind, Tornado
Action Type	Property Protection Activity
Priority (BCR)	Low
Jurisdiction(s)	City of Stillwater
Action Narrative	Install windows with break-resistant glass in schools, government offices, and critical facilities
Lead Agency	SEMA, City of Stillwater Engineering
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 10	Develop Flood Recognition & Response Plan
Hazard(s) Addressed	Flood, Dam Incident
Action Type	Emergency Services Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Develop a Flood Recognition & Response Plan in compliance with NFIP CRS requirements for recognition, warning, evacuation, and response to protect Stillwater residents from dam incidents and flooding.
Lead Agency	SEMA, Payne County Conservation District, Noble County Conservation District, Oklahoma State University
Implementation Timeline	SEMA, City of Stillwater Stormwater Services
Potential Funding Sources	Local/General, FEMA HMA



Action Item 11	Maintain and enhance stream conveyance across all City watersheds through Nature Based Solutions
Hazard(s) Addressed	Flood, Dam Incident
Action Type	Floodplain Management Regulation, Natural Resource Protection Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Maintain natural and beneficial functions of streams and floodplains across Stillwater and control erosion through nature-based solutions such as use of native vegetation or sediment capture that can assist in recreational opportunities for residents that also serve as flood control projects.
Lead Agency	SEMA, City of Stillwater Engineering, City of Stillwater Stormwater Services
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 12	Rehabilitate Lake Carl Blackwell Dam
Hazard(s) Addressed	Dam Incident, Flood
Action Type	Floodplain Management Regulatory, Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Work with OSU to bring Lake Carl Blackwell Dam up to current design and safety standards.
Lead Agency	SEMA, City of Stillwater Engineering, Oklahoma State University
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA



Action Item 13	Review and update floodplain regulation development permitting practices
Hazard(s) Addressed	Dam Incident, Flood
Action Type	Floodplain Management Regulation
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Review and update methods of limiting or prohibiting construction in flood prone or dam inundation areas, and construct regional detention ponds to compensate for future urban development in accordance with the Master Drainage Plans
Lead Agency	SEMA, City of Stillwater Engineering, City of Stillwater Stormwater Services
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General

Action Item 14	Develop water conservation measures for implementation during drought
Hazard(s) Addressed	Drought
Action Type	Emergency Services Activity
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Develop water conservation programs, like WaterSense, to include rate structures and implementation procedures to conserve water during periods of severe drought.
Lead Agency	SEMA, City of Stillwater Water Utility Services
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA



Action Item 15	Implement flood mitigation solutions identified in Master Drainage Plan
Hazard(s) Addressed	Flood, Dam Incident
Action Type	Floodplain Management Regulation, Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Implement recommended solutions identified in Master Drainage Plan, including structural and non-structural flood mitigation measures for flood prone areas.
Lead Agency	SEMA, City of Stillwater Engineering, City of Stillwater Stormwater Services
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 16	Secure/elevate critical equipment inside public buildings located in a floodplain
Hazard(s) Addressed	Flood, Dam Incident
Action Type	Preventative Activity
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Identify and implement ways of securing and elevating equipment inside public buildings located in a floodplain.
Lead Agency	SEMA
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA



Action Item 17	Obtain Elevation Certificates for pre-FIRM homes located in the floodplain
Hazard(s) Addressed	Flood, Dam Incident
Action Type	Floodplain Management Regulation
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Obtain elevation certificates for pre-FIRM homes located in the floodplain.
Lead Agency	City of Stillwater Engineering
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 18	Continue property acquisition initiative
Hazard(s) Addressed	Flood
Action Type	Floodplain Management Regulation
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Acquire floodplain properties and repetitive/severe repetitive loss properties.
Lead Agency	City of Stillwater Stormwater/Floodplain Management
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General/FEMA HMA



Action Item 19	Conduct public awareness campaign for NFIP flood insurance and flood hazard risk education
Hazard(s) Addressed	Flood
Action Type	Public Information Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Inform residents of the availability of flood insurance to eligible National Flood Insurance Program communities and of flood proofing and flood mitigation alternatives, such as elevation of structure or utilities, diking, etc
Lead Agency	City of Stillwater Stormwater/Floodplain Management
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 20	Divert stormwater flow away from sanitary sewer system
Hazard(s) Addressed	Flood
Action Type	Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Continue to reduce and eliminate storm-water infiltration and inflow (I&I) into the sanitary sewer system
Lead Agency	City of Stillwater Utility, City of Stillwater Engineering Services
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General



Action Item 21	Maintain stormwater drainage infrastructure, and upgrade as necessary
Hazard(s) Addressed	Flood
Action Type	Structural Project
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Continue to maintain culverts to allow stormwater drainage
Lead Agency	City of Stillwater Stormwater
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 22	Implement safe room program
Hazard(s) Addressed	High Wind, Tornado
Action Type	Structural Project
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Implement safe room program(s)
Lead Agency	SEMA
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General FEMA HMA



Action Item 23	Continue and expand public awareness program on fire risk
Hazard(s) Addressed	Fire/Wildfire
Action Type	Public Information Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Continue the fire department smoke detector program and battery replacement program
Lead Agency	SEMA, City of Stillwater Fire Department
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 24	Develop Community Wildfire Protection Plan
Hazard(s) Addressed	Fire/Wildfire
Action Type	Emergency Services Activity, Property Protection Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Recertify in the Firewise program (www.firewise.org), and develop Community Wildfire Protection Plan.
Lead Agency	SEMA, City of Stillwater Engineering, City of Stillwater Fire Department
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, Oklahoma Forestry Services, FEMA HMA



Action Item 25	Determine inundation areas for NRCS dams
Hazard(s) Addressed	Dam Incident
Action Type	Property Protection Activity, Emergency Services Activity
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Work with NRCS to obtain data not available to fully evaluate the areas impacted by dam breach
Lead Agency	SEMA, City of Stillwater Stormwater/Floodplain Management, Payne County Conservation District, Noble County Conservation District
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local, FEMA, NRCS, USACE

Action Item 26	Develop Flood Warning System
Hazard(s) Addressed	Flood
Action Type	Emergency Services Activity
Priority (BCR)	High
Jurisdiction(s)	City of Stillwater
Action Narrative	Install, Replace, or Upgrade existing water level monitoring systems in area creeks in order to utilize real-time information to warn residents of impending flash flood risks.
Lead Agency	SEMA, City of Stillwater Stormwater/Floodplain Management
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA



Action Item 27		Develop a Continuity of Operations Plan
Hazard(s) Addressed	Dam Incident, Earthquake, Extreme Heat, Fire/Wildfire, Flood, Hail, High Wind, Tornado, Severe Winter Storms/Extreme Cold, Hazardous Materials	
Action Type	Emergency Services Activity	
Priority (BCR)	High	
Jurisdiction(s)	City of Stillwater	
Action Narrative	Coordinate across all departments across the City to develop a unified Continuity of Operations Plan to ensure critical City services continue to be offered uninterrupted during disasters.	
Lead Agency	SEMA	
Implementation Timeline	12 to 60 months	
Potential Funding Sources	Local/General, EMPG	

Action Item 28		Update Debris Removal Plan
Hazard(s) Addressed	Dam Incident, Earthquake, Fire/Wildfire, Flood, High Wind, Tornado, Severe Winter Storms/Extreme Cold	
Action Type	Emergency Services Activity	
Priority (BCR)	Medium	
Jurisdiction(s)	City of Stillwater	
Action Narrative	As the current Debris Removal Plan nears 5 years in maturity, officials have identified a need to update this plan to reflect a comprehensive set of hazards which result in debris that necessitates a plan for its removal.	
Lead Agency	SEMA	
Implementation Timeline	12 to 60 months	
Potential Funding Sources	Local/General, EMPG	



Action Item 29	Develop a plan to maintain MS4 infrastructure
Hazard(s) Addressed	Dam Incident, Flood
Action Type	Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Throughout the course of each year, a variety of hazards can cause a reduction in integrity of the City's MS4 infrastructure. By developing a plan to inspect and maintain water delivery lines, sanitary sewer, and stormwater drainage infrastructure and have a plan for repairs and replacement as needed.
Lead Agency	City of Stillwater Public Works, City of Stillwater Stormwater/Floodplain Management
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local/General, FEMA HMA

Action Item 30	Update inundation mapping for 9 Dams with inundation effects within the City of Stillwater
Hazard(s) Addressed	Dam Incident
Action Type	Structural Project
Priority (BCR)	Medium
Jurisdiction(s)	City of Stillwater
Action Narrative	Current dam inundation mapping in the Cedar Isle Dam EAP is difficult to read and understand the extent of inundation during each of the typically mapped scenarios. This initiative seeks to update the inundation mapping for this dam to clearly describe the extent of impact in such scenarios. Additionally, further studies are needed to identify depth of inundation waters in the planning area that may result from a breach at the following dams: Lake Carl Blackwell, Lakeside Golf Course (NRCS Site 24), Whittenberg Lake (NRCS Site 26), Hazen Lake (NRCS Site 28), NRCS Site 29, NRCS Site 30, NRCS Site 33C, and Lake McMurtry (NRCS Site 40).
Lead Agency	SEMA, City of Stillwater Stormwater/Floodplain Management, OWRB
Implementation Timeline	12 to 60 months
Potential Funding Sources	Local, FEMA, OWRB, USACE



4.6. Action Item Prioritization

Element C5-a. Does the plan describe the criteria used for prioritizing actions?

A review and analysis of the risks associated with natural and manmade hazards that might potentially impact the community was conducted by the Core Planning Committee, and then prioritization of the mitigation measures according to the level of impact each has had on the community was performed. From there, an Action Plan was developed for the measures. The results were tabulated, and the individual measures ranked by highest priority. Descriptions of benefit criteria which were considered when evaluating action items are included in Table 4-9.

Table 4-9 Benefit Criteria Considered When Evaluating Action Items

Criteria	Description
Public Safety	How effective will the action be at protecting lives and preventing injuries?
Critical Infrastructure	Will the action safeguard assets vital for the community's functioning?
Other Public Property	How significant will the action be in eliminating or reducing damage to infrastructure and public open spaces? What is the approximate dollar value of the expected benefit(s)?
Other Private Property	How significant will the action be in eliminating or reducing damage to private property? What is the approximate dollar value of the expected benefit(s)?
Development	Does the action mitigate or prevent development in high-risk areas?
Environmental	Will the action include natural solutions or safeguard the environment?
Partnerships	Will the action provide an opportunity to foster new partnerships or strengthen existing ones?
NFIP	Will the action maintain, increase, or commence a jurisdiction's compliance with NFIP requirements? (For more information, see the capability section)
Other Community Objectives	Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation?



4.6.1. Costs

An important consideration when evaluating action items is their cost. Some costs can make it difficult to execute a mitigation action, while others can make it outright impossible. Those considered impossible were eliminated from consideration. In Table 4-10, an overview of all general categories of costs considered is listed.

Table 4-10 Cost Criteria Considered When Evaluating Action Items

Criteria	Description
Technical	Is the mitigation action technically feasible? Is it financially feasible? Is it a long-term solution?
Construction	Is the action financially feasible?
Political	Is there overall public support for the mitigation action? Is there the political will to support it?
Legal	Does the community have the authority to implement the action?
Environmental	What are the potential environmental impacts of the action? Will it comply with environmental regulations?
Social	Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of marginalized people?
Administrative	Does the community have the personnel and administrative capabilities to implement the action and maintain it or does it require outside help? Will this strain community resources excessively? Could the cost of maintaining partnerships necessary to complete this project be burdensome?



4.6.2. Benefit-Cost Review

Each action's benefits are assigned a rating of high, medium, or low based on which benefits an action incorporates, and to what degree those benefits are incorporated. Costs are assigned similar ratings. Costs estimate the internal and external resources needed to implement an action, including the likelihood of obtaining those resources.

Visualizations and descriptions of this review process are depicted in Table 4-11.

From these metrics, the Core Planning Committee developed a benefit-cost review methodology. The higher the Benefit Cost Review assigned to the action, the higher that action was prioritized. The prioritized actions can be found in Section 4.5.

Table 4-11 Visualizing and Understanding Benefit-Cost Reviews and Ratings

Costs			
Classification	Description	Classification	Description
High	The action meets many priority benefit criteria and/or meets these criteria to a significant degree	Low	The action does not strain community resources and minimal external assistance is required
Medium	The action meets some priority benefit criteria and/or meets criteria to a moderate degree	Medium	The action could strain community resources, making external assistance a significant component of the action
Low	The action meets almost no priority benefit criteria and/or meets criteria to a minimal degree	High	The action strains community resources significantly; external assistance, which is crucial, is not guaranteed





Chapter 5 PLAN MAINTENANCE AND INTEGRATION

Summary of Changes

Changes in this chapter include:

- Expanded discussion and detail on continuing public engagement to participate in maintenance and updates throughout the life cycle of this plan.
- Discussion of not only future intent of implementation into other community planning mechanisms, but additionally, how the previous plan update was incorporated since its approval.

5.1. Continued Public Involvement

Element D1-a. Does the plan describe how communities will continue to seek future public participation after the plan has been approved?

Public involvement in the planning process was encouraged throughout the lifecycle of this project with promotion of both Stakeholder Workshops in addition to the Public Meeting and development of a survey designed, in part, to gather input from Stillwater residents on how hazards affect them.

Continually involving the public directly in the update and maintenance of the 2025 City of Stillwater Multi-Hazard Mitigation Plan is a priority of the City of Stillwater. Elements of this commitment include presentations given to gatherings of civic groups, Stillwater Public Schools, Oklahoma State University, internal and external partners at the City of Stillwater and in the community, Payne County Fair, local television news segments, and other various local engagements.

As a complement to these activities, a GIS portal is being developed as a part of this plan update, which will provide interested residents with frequently updated information on the progress of plan implementation, and which neighborhoods in the planning area are most at risk to each of the hazards profiled. While this product is currently under development concurrent with this plan, the City will employ various promotional methods to inform residents of its completion, including but not limited to social media postings and the methods listed in Section 2.4.



5.2. Plan Monitoring, Evaluating, and Updating

Element D2-a. Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process?

Element D2-b. Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible.

Element D2-c. Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process?

Tracking Mitigation Actions

Stillwater's Mitigation Planning Committee will continue to meet on a regular basis after the conclusion of this planning process to monitor progress of the implementation of this plan, evaluate activities, periodically recommend revisions to the document and Mitigation Action Items, and tracking their progress. By virtue of the community's participation in CRS, the status of the implementation of the Mitigation Action Items identified in this plan are reviewed annually, at a minimum. As such, the City's Floodplain Administrator and Emergency Manager will be tasked with overseeing this process.

Evaluating Plan Effectiveness

An annual evaluation of the effectiveness of this plan will be conducted through review of risk assessments to confirm that hazard information, vulnerabilities, and impacts reflect current trends and conditions. Goals and mitigation strategies will undergo scrutiny to align with jurisdictional priorities and address any newly identified risks. Moving forward, these evaluations will be conducted by City Council each budget year as a part of the determination of budget allocations for the following fiscal year.

As a part of Stillwater's Mitigation Planning Committee, maintenance process outcomes will be reviewed by this group, as will the integration of this document into other local planning mechanisms and updates on the status of the progress of Mitigation Action Items identified in Section 4.5.

Updating the Plan

Preparation for the next update to this plan will begin 18 to 24 months prior to expiration. Planning team meetings will focus on updating the risk assessment and revising mitigation strategies. Draft updates will be submitted to Oklahoma Emergency Management between 6 to 12 months prior to expiration, with revisions incorporated based on their feedback. Final approval by FEMA will follow, and the City of Stillwater will adopt the plan through a formal resolution indicating approval by their governing body.

Actions undertaken during the 48-to-60-month cycle following approval of this plan include convening of the local planning team, determining the scope of work for the update, issuing a Request For Qualifications (RFQ) should a contractor(s) be deemed necessary, securing funding, selecting a contractor, then developing the update. Stillwater's Emergency Manager will oversee and monitor the development of the next update, ensuring meetings are scheduled, and all required representatives are invited and able to attend and participate.



Table 5-1 Plan Maintenance Schedule

Meeting Year	Topic
2025	Monitor Plan Progress and Hazard Activity
2028	Monitor Plan Progress, Hazard Activity, and Begin to Plan for Update Process
2029	2030 HMP Update Planning Process
2030	Adopt Plan Update and Begin Monitoring Process

5.3. Integration of Data, Goals, and Action Items into Other Planning Mechanisms

Element D3-a. Does the plan describe the process the community will follow to integrate the ideas, information, and strategy of the mitigation plan into other planning mechanisms?

Element D3-b. Does the plan identify the planning mechanisms for each plan participant into which the ideas, information, and strategy from the mitigation plan may be integrated?

Element D3-c. For multi-jurisdictional plans, does the plan describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms?

As discussed in Section 1.2.1, the overall goal of the City of Stillwater Multi-Hazard Mitigation Plan is to create a disaster-resistant community and improve the safety and well-being of Stillwater by reducing deaths, injuries, property damage, environmental and other losses from natural and technological hazards in a manner that advances community goals, quality of life, and results in a more livable, viable, and sustainable community.

Describing the Integration Process

Ongoing integration of ideas, information, and strategies from the Hazard Mitigation Plan into other planning mechanisms will occur through coordinated efforts led by the City of Stillwater. Mitigation actions and strategies will be incorporated into comprehensive plans, capital improvement plans, zoning ordinances, floodplain management regulations, and emergency response plans. Annual planning team evaluations during meetings will identify opportunities for integration of this plan into other planning mechanisms as appropriate, ensuring alignment with the goals and objectives of this plan.

Reporting will be compiled detailing how mitigation strategies are incorporated into planning mechanisms and highlighting gaps requiring additional attention through an innovative GIS portal which will be used by the City to track the status of the implementation of this plan and of each of the mitigation action items identified herein. These evaluations will ensure strategies remain relevant and actionable throughout this plan's lifecycle.

Identifying Planning Mechanisms

Mechanisms identified for integration include comprehensive plans, zoning ordinances, floodplain management regulations, capital improvement plans, and operational plans employed by City departments. Flood mitigation strategies will enhance land use and zoning regulations, while capital improvement plans will prioritize projects that reduce vulnerability to hazards.



Information Integration Processes for Multi-Jurisdictional Plans

Each participating jurisdiction follows a tailored process for integrating mitigation strategies into identified planning mechanisms.

City of Stillwater

All City departments will integrate mitigation strategies into ordinances, infrastructure projects, and plans in use by internal and external partners. Annual updates will evaluate progress and identify areas requiring further action.

Structural mitigation measures, such as improved codes and ordinances, safe rooms, etc. will be assessed during planning team meetings.

Development of recommended plans and studies, particularly those with impacts felt community-wide, will also be considered at planning team meetings.

Integration will be monitored by the City, providing guidance to each department and City Council to ensure consistency across planning mechanisms.



5.4. Previous Integration of Data, Goals, and Action Items into Other Planning Mechanisms

Element E2-c. Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms?

Descriptions of how Stillwater has integrated the 2020 HMP into some of the City's other planning mechanisms are listed in Table 5-1.

Figure 5-1 Integration of HMP Into Other City of Stillwater Planning Mechanisms

Planning Mechanism	Integration of HMP
C³ Comprehensive Plan 2030	References the City's Hazard Mitigation Plan in Chapter 7 and discusses stormwater management as well as other environmental considerations for future development
Capital Improvements Plan	Infrastructure needs, including those applicable in the floodplain management space such as stormwater drainage and parks and open spaces, are discussed in this plan, and are based on information in the City's HMP
Economic Development Plan	Proposed in Stillwater's 2005 Core Commercial Districts Master Plan, Tax Increment Financing (TIF) Districts were established in the City as a source of public financing of necessary structural improvements and enhanced infrastructure. TIF Districts are maintained by Stillwater Economic Development Authority (SEDA) and are a part of the City's Economic Development Plan, also developed and maintained by SEDA.
Stormwater Management Plan	Flood hazard risk assessments from the City's Hazard Mitigation Plan updates are integrated into the Stormwater Management Plan, providing City officials with the most up-to-date hazard risk information to coordinate floodplain management efforts accordingly.
Boomer Creek Master Drainage Plan	Along with engineering flood studies conducted along the Boomer Creek Watershed, information from the 2020 City of Stillwater Hazard Mitigation Plan was referenced in order to develop recommendations for ways that the City can alleviate the effects of flooding.



Chapter 6 PLAN UPDATE

INFORMATION

Summary of Changes

Changes in this chapter include:

- Expanded discussion and graphics describing changes in development that have occurred in the community since the approval of the last plan.
- The new section is devoted to discussing changes in jurisdictional priorities since the approval of the last plan.

Included in this chapter is a discussion of how this plan has been updated to reflect changes in jurisdictional development and priorities, their effects on the City's vulnerability to hazards, and updates on the statuses of mitigation action items from the 2020 plan.

6.1. Changes in Jurisdictional Development

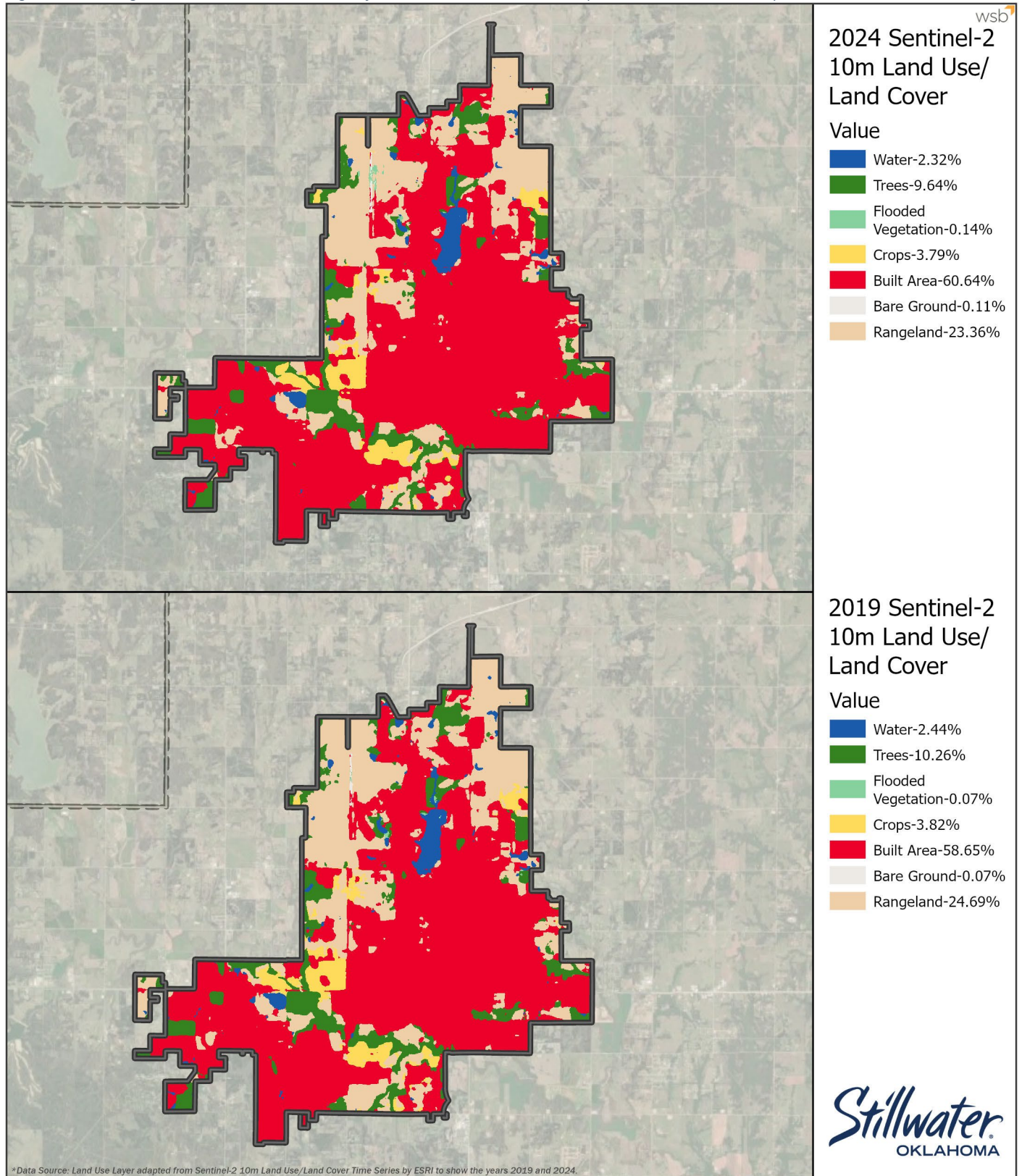
Element E1-a. Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved?

Changes in land use across the City of Stillwater between 2019 and 2024 have been depicted in Figure 6-1. At quick glance, the two figures appear similar, but upon closer inspection some differences become clear. First, a direct comparison of percentages of each type of land use reveals the two types which saw the largest change were Built Area (+1.99% change) and Rangeland (-1.33% change).

As we learned in Chapter 1, the total surface area of the City of Stillwater is 29.5 square miles. Thus, an increase of 1.99% in this area is equal to 0.6 square miles of increase in the Built Area, or 375.7 Acres. Correspondingly, a decrease of 1.33% of Rangeland within city limits equates to 0.4 square miles of decrease in Built Area, or 251.1 Acres. When put into this perspective, this is a considerable increase in the Built Area, and a considerable decrease in Rangeland.



Figure 6-1 Changes in Land Use across the City of Stillwater, 2019 to 2024 (Sentinel-2 10m Satellite)





With respect to the effects these changes have on the vulnerability of the planning area to the hazards profiled in this plan, vulnerability of the newly built area corresponds to an increase in the potential of damage as a result of all hazards profiled. Increases in the potential for an urban heat island effect, which can exacerbate instances of Extreme Heat, also correspond to an increase in the amount of concentrated Built Area. Additionally, increases in paved surfaces that contribute to this increase as well as foundations of new structures will be vulnerable to Expansive Soils. New development along Cow Creek just north of OK-51 in the western part of the City will be vulnerable to flooding. Other changes to vulnerability of flooding as a result of the effects of impermeable surfaces are also likely, though exact determinations of locations and extent of such effects require further study. Wildfire risk is also commonly associated with increases in vulnerability as built environment encroaches into WUI areas and those of increased wildfire risk. New Built Area in far southern Stillwater, north of 32nd Ave near Husband St is in an area of moderate to high risk for wildfire. Another area where there has been an increase in Built Area within an area of enhanced wildfire risk is near McElroy Rd in far eastern Stillwater.

6.2. Changes in Jurisdictional Priorities

Element E2-a. Does the plan describe how it was revised due to changes in community priorities?

Jurisdictional priorities can change suddenly or gradually over time, depending upon the political environment which exists locally, and the level of appetite for change. Overall, there have been no significant changes in priorities in the planning area.

One change in priorities of note is the exclusion of Stillwater Public Schools as a participating jurisdiction from this plan update. While the need to enhance the resilience of the District and its students and staff against the hazards profiled in this plan continues to exist, challenges in the form of constraints on the availability of District officials to attend and participate in the meetings that make up the planning process for this plan's development have proved to be insurmountable. Thus, it was determined during the course of this planning process that their participation in this planning update would not occur. An evaluation of their ability to participate in the next plan update will be conducted at that time, and if the ability for them to participate exists, invitations will be extended to District officials to attend and participate in meetings.

6.3. Status of Previous Mitigation Action Items

Element E2-b. Does the plan include a status update for all mitigation actions identified in the previous mitigation plan?

Thirty-nine mitigation action items were identified in the 2020 City of Stillwater Hazard Mitigation Plan. These actions, accompanied by their status, are listed in Table 6-1.



Table 6-1 Status of Previous Action Items

#	Action Item	2025 Status	Notes
1	Provide the public with information on all hazards, mitigation, preparation, and response topics. Ensure that vulnerable and functional needs populations are reached.	Ongoing	This action is being carried over into the 2025 Plan.
2	Develop a coordinated Emergency Response and Operations Procedures Plan and coordinate developed plan with the Public Schools Emergency Operations Plan.	Completed	This action has been completed.
3	Work with agencies to identify vulnerable and special needs populations within the jurisdiction and develop a voluntary inventory of these special need's populations requiring special assistance in the event of a disaster.	Ongoing	This action is being carried over into the 2025 Plan.
4	Develop Continuity of Operations Plans (COOP) for the City of Stillwater and provide education opportunities on COOPs for interested parties.	Ongoing	This action is being carried over into the 2025 Plan.
5	Install generators or provide wiring and transfer switches to accommodate emergency generators during power outages for critical facilities, lift stations, and structures used for emergency shelters.	Ongoing	Some of this has been completed, including the installation of a transfer switch at the City's Water Treatment Plant.
6	Continue to bury and/or harden municipal utility overhead electric power lines. Priorities to include feeders to critical facilities and secondary lines in neighborhoods with mature trees.	Ongoing	Officials note that new developments are required to have buried power lines. This action is being carried over into the 2025 Plan and combined with #39 from the 2020 Plan.
7	Evaluate, upgrade, and maintain outdoor warning and alert systems.	Completed	This action has been completed.
8	Plan, design, and install a parallel water supply line for the City of Stillwater.	Ongoing	This action is being carried over into the 2025 Plan.
9	Install safe-rooms or shelters in existing and new school facilities.	Ongoing	Stillwater Public Schools carries the burden of responsibility for this action item moving forward, and they have withdrawn their participation in this plan update.



#	Action Item	2025 Status	Notes
10	Evaluate and install employee shelters/safe rooms at public critical facilities that do not already have one.	Ongoing	This action is being carried over into the 2025 Plan and combined with #9 from the 2020 Plan.
11	Install break resistant glass in government offices and critical facilities, including schools.	Ongoing	As windows on City buildings are replaced, they are being fitted with bulletproof glass. Stillwater Public Schools, who has withdrawn their participation in this plan update, shoulders the burden of responsibility for the replacement of windows on its facilities moving forward.
12	Continue to create, enhance, and incorporate warning/evacuation plans and communication systems for areas threatened by dam failures or flooding.	Ongoing	This action is being carried over into the 2025 Plan.
13	Maintain natural and beneficial functions of streams and floodplains.	Ongoing	This action is being carried over into the 2025 Plan and combined with #16, 18, and 20 from the 2020 Plan.
14	Work with OSU to bring Lake Carl Blackwell Dam up to current design and safety standards.	Ongoing	This action is being carried over into the 2025 Plan.
15	Review and update methods of limiting or prohibiting construction in flood prone or dam inundation areas.	Ongoing	This action is being carried over into the 2025 Plan and combined with #29 from the 2020 Plan.
16	Install, Replace, or Upgrade existing water level monitoring systems in area creeks.	Ongoing	This action is being carried over into the 2025 Plan and combined with #13, 18, and 20 from the 2020 Plan.
17	Develop water conservations programs, including rate structures and implementation.	Ongoing	This action is being carried over into the 2025 Plan and combined with #37 from the 2020 Plan.
18	Continue to control erosion during development with vegetation or sediment capture, reducing sedimentation which may fill in channels and lakes, reducing their ability to carry or store floodwaters.	Ongoing	This action is being carried over into the 2025 Plan and combined with #13, 16, and 20 from the 2020 Plan.
19	Implement volunteer program to clean local streams of debris and waste.	Completed	This action has been completed.



#	Action Item	2025 Status	Notes
20	Maintain habitat for flora and fauna and include recreation opportunities (such as off-street hiking and biking trails) or outdoor classrooms in flood control projects.	Ongoing	This action is being carried over into the 2025 Plan and combined with #13, 16, and 18 from the 2020 Plan.
21	Prepare a Master Drainage Plan that identifies all flooding problems within Stillwater and recommends cost-effective and political acceptable solutions	Completed	This action is being carried over into the 2025 Plan and combined with #27 from the 2020 Plan.
22	Reinstate a Fee-in-Lieu of On-Site Detention Ordinance.	Completed	This action has been completed.
23	Determine the feasibility of increasing the stormwater utility fee to fund maintenance of creeks, streams, and small drainage projects.	Completed	This action has been completed.
24	Identify and implement ways of securing and elevating equipment inside public buildings located in a floodplain.	Ongoing	This action is being carried over into the 2025 Plan.
25	Obtain elevation certificates for pre-FIRM homes located in the floodplain.	Ongoing	This action is being carried over into the 2025 Plan.
26	Acquire floodplain properties and repetitive/severe repetitive loss properties.	Ongoing	City has acquired two Severe Repetitive Loss properties, one of which was located in the floodplain.
27	Implement structural and non-structural flood mitigation measures for flood-prone properties, as recommended in the Master Drainage Plan	Ongoing	This action is being carried over into the 2025 Plan and combined with #21 from the 2020 Plan.
28	Inform residents of the availability of flood insurance to eligible National Flood Insurance Program communities and of flood proofing and flood mitigation alternatives, such as elevation of structure or utilities, diking, etc.	Ongoing	This action is being carried over into the 2025 Plan.
29	Construct regional detention ponds to compensate for future urban development in accordance with the Master Drainage Plans	Ongoing	This action is being carried over into the 2025 Plan and combined with #15 from the 2020 Plan.
30	Continue to reduce and eliminate storm-water infiltration and inflow (I&I) into the sanitary sewer system	Ongoing	This action is being carried over into the 2025 Plan.



#	Action Item	2025 Status	Notes
31	Continue to maintain culverts to allow stormwater drainage	Ongoing	This action is being carried over into the 2025 Plan.
32	Provide hail-resistant measures/materials to protect existing public infrastructure improvements	Ongoing	This action is being carried over into the 2025 Plan and combined with #11 from the 2020 Plan.
33	Implement safe room program(s)	Ongoing	This action is being carried over into the 2025 Plan.
34	Continue the fire department smoke detector program and battery replacement program	Completed	This action has been completed.
35	Continue to implement the Firewise program and renew Firewise Community certification. (www.firewise.org).	Ongoing	City has discontinued Firewise certification and is in the process of searching for a replacement initiative to enhance resilience to wildfire risk.
36	Study and implement strategies for protecting the school system from flooding and dam failure inundation.	Ongoing	This action is being carried over into the 2025 Plan.
37	Implement aspects of the WaterSense Program to help save water during period of extreme heat and drought.	Ongoing	This action is being carried over into the 2025 Plan and combined with #17 from the 2020 Plan.
38	Work with NRCS to obtain data not available to fully evaluate the areas impacted by dam breach	Ongoing	This action is being carried over into the 2025 Plan.
39	Harden Electric Utility in Stillwater	Ongoing	This action is being carried over into the 2025 Plan and combined with #6 from the 2020 Plan.



Appendix A City of Stillwater Flood Ordinances

A.1. Article XVIII – Flood Hazard Regulations

ARTICLE XVIII. FLOOD HAZARD REGULATIONS

Sec. 23-370. Statutory authorization; findings of fact; purpose and methods.

(a) Statutory authorization. The legislature of the state has in 82 O.S. §§ 1601—1618, as amended, delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, the city council ordains the following.

(b) Findings of fact. The following findings of fact establish the need for flood hazard regulations in the city:

(1) The flood hazard areas of the city are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which may adversely affect the public health, safety and general welfare.

(2) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.

(c) Statement of purpose. It is the purpose of this article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

(1) Protect human life and health;

(2) Minimize expenditure of public money for costly flood control projects;

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) Minimize prolonged business interruptions;

(5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

(6) Help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize future flood blight areas; and

(7) Ensure that potential buyers are notified that property is in a flood area.



(d) Methods of reducing flood losses. In order to accomplish its purposes, these regulations use the following methods:

- (1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, are protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
- (4) Control filling, grading, dredging and other development which may increase flood damage;
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands;
- (6) Maintain channels and vegetation in floodprone areas so as to not increase flood hazards.

(Ord. No. 3023, § 1(23.370), 3-3-2008)

Sec. 23-371. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

These definitions shall only apply to this article.

Appeal means a request to the board of drainage appeals for review of a decision, action, or interpretation of the floodplain administrator, with respect to this exhibit.

Accessory structure means structures which are on the same parcel of property as the principle structure and the use of which is incidental to the use of the principle structure (such as garages and storage sheds).

Adverse impact means when the action of one property owner creates harm to another property owner by increasing flood peaks, flood stage, flood velocity, or by causing erosion and/or sedimentation, or other damage.

Area of shallow flooding means a designated AO, AH, or VO zone on a community's flood insurance rate map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Base flood means a flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation means the elevation in feet above mean sea level, the elevation of the base flood.

Basement means any area of the building having its floor subgrade (below ground level) on all sides.

Compensatory storage means loss of flood storage due to buildings or fill in the floodplain which is compensated for by providing an equal volume of storage to replace what is lost.

Development.



(1) The term "development" means any manmade change in improved and 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 or materials.

(2) The term "development" does not mean:

- a. Lawn and yard care;
- b. Gardening;
- c. Tree care and maintenance;
- d. Removal of trees or other vegetation damaged by natural forces.

Elevated building.

(1) The term "elevated building" means a nonbasement building:

- a. Built, in the case of a building in zones A1—30, AE, A, A99, AO, AH, B, C, X and D, to have the top of the elevated floor, or in the case of a building in zones V1—30, VE or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water; and
- b. Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood in the case of zones A1—30, AE, A, A99, AO, AH, B, C, X and D.

(2) The term "elevated building" includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters. In the case of zones V1—30, VE, or V, the term "elevated building" also includes a building otherwise meeting the definition of "elevated building," even though the lower area is enclosed by means of breakaway walls if the breakaway walls meet the standards of section 60.3(e)(5) of the National Flood Insurance Program regulations.

Existing construction means for the purposes of determining rates, structures for which the start of construction commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. The term "existing construction" may also be referred to as existing structures.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters.
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.



Flood insurance rate map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated both the floodplain and the risk premium zones applicable to the community.

Flood insurance study means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, water surface elevation of the base flood, as well as the flood boundary-floodway map.

Flood protection system means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the floodplain within a community and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodplain means any land area susceptible to being inundated by water from any source (see definition of flooding). For the purposes of this article, the term "floodplain" refers to the area of special flood hazard which is the land within a community subject to a one percent or greater chance of flooding in any given year. The floodplain is designated as zones A, AE, AH, AO, AR, A99, V or VE on the FIRM. The term "floodplain" is also referred to as the regulatory floodplain or the effective floodplain.

Floodplain administrator means a person accredited by the state water resources board and designated to administer and implement laws and regulations relating to the management of the floodplains.

Floodplain board means the board of drainage appeals for the city.

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term "floodplain management regulations" means such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Floodproofing means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 12 inches. The floodway is designated as such on the effective FIRM. The term "floodway" is also referred to as "regulatory floodway" or "effective floodway."

Functionally dependent use.

(1) The term "functionally dependent use" means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities.



(2) The term "functionally dependent use" does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure means any structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the National Park Service of the U.S. Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior; or
 - b. Directly by the Secretary of the Interior in states without approved programs.

Levee means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

Levee system means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirement of section 60.3 of the National Flood Insurance Program regulations.

Manufactured home.

- (1) The term "manufactured home" means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities.
- (2) The term "manufactured home" does not include a recreational vehicle.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Map changes.



(1) Conditional letter of map amendment (CLOMA) means FEMA's comment on whether a proposed project would be excluded from the floodplain shown on the effective FIRM. There is no appeal period. The letter becomes effective on the date sent. This letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, would or would not be removed from the SFHA by FEMA if later submitted as a request for a letter of map amendment.

(2) Conditional letter of map revision (CLOMR) means FEMA's comment on whether a proposed project would be excluded from FEMA's comment on a proposed project that would affect the hydrologic and/or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway or effective base flood elevations. There is no appeal period. The letter becomes effective on the date sent. This letter does not revise an effective FIRM, it indicates whether the project, if built as proposed, would or would not be removed from the floodplain by FEMA if later submitted as a request for a letter of map revision.

(3) Conditional letter of map revision based on fill (CLOMR-F) means FEMA's comment on whether a proposed project would be excluded from FEMA's comment on whether a proposed project involving the placement of fill would exclude an area from the floodplain shown on the FIRM. There is no appeal period. The letter becomes effective on the date sent. This letter does not revise an effective FIRM, it indicates whether the project, if built as proposed, would or would not be removed from the SFHA by FEMA if later submitted as a request for a letter of map revision based on fill.

(4) Letter of map amendment (LOMA) means FEMA's comment on whether a proposed project would be excluded from an official amendment, by letter, to an effective FIRM. A LOMA establishes a property's location in relation to the floodplain. There is no appeal period. The letter becomes effective on the date sent.

(5) Letter of map revision (LOMR) means FEMA's comment on whether a proposed project would be excluded from an official revision, by letter, to an effective FIRM. A LOMR may change flood insurance risk zones, floodplain and/or floodway boundary delineations, planimetric features, and/or base flood elevations. See the LOMR effective chart to determine when a LOMR becomes effective.

(6) Letter of map revision based on fill (LOMR-F) means FEMA's comment on whether a proposed project would be excluded from an official revision, by letter, to an effective FIRM. A LOMR-F provides FEMA's determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and excluded from the floodplain. The letter becomes effective on the date sent.

Mean sea level means, for purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988 or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.

New construction means, for the purpose of determining insurance rates, structures for which the start of construction commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, the term "new construction" means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the



pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

Recreational vehicle means a vehicle which is:

- (1) Built on a single chassis;
- (2) 400 square feet or less when measured at the largest horizontal projections;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Remedy a violation means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

Start of construction, for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The term "actual start" means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. The term "permanent construction" does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the term "actual start of construction" means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

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.

Substantial improvement.

- (1) The term "substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure, or the greater of 500 square feet or 35 percent of the floor area of the structure either:
 - a. Before the improvement or repair is started; or
 - b. If the structure has been damaged and is being restored, before the damage occurred.



For the purposes of this definition, substantial improvement is considered to occur 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 structure.

(2) The term "substantial improvement" does not, however, include either:

- a. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to ensure safe living conditions; or
- b. Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places; provided that the alteration would not preclude the structure's continued designation as a historic structure.

Variance means a grant of relief to a person from the requirement of these regulations or ordinance when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by these regulations.

Violation means the failure of a structure or other development to be fully compliant with this community's floodplain management regulations.

Water surface elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(Ord. No. 3023, § 1(23.371), 3-3-2008)

Sec. 23-372. General provisions.

(a) Lands to which this article applies. This floodplain management ordinance shall apply to all areas of special flood hazard within the corporate limits of the city.

(b) Basis for establishing the floodplain. The floodplain identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for Payne County and Incorporated Areas," dated May 16, 2007, with accompanying flood insurance rate map (FIRM) and are hereby adopted by reference and declared to be a part of this article.

(c) Compliance. No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this article and other applicable regulations.

(d) Abrogation and greater restrictions. this article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and any other ordinance, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(e) Interpretation. In the interpretation and application of this article, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Deemed neither to limit nor repeal any other powers granted under state statutes.

(f) Warning and disclaimer of liability. The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations.



On rare occasions greater floods can and will occur and flood heights may be increased by manmade or natural causes. This article does not imply that land outside the floodplain or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on these regulations or any administrative decision lawfully made hereunder.

(Ord. No. 3023, § 1(23.372), 3-3-2008)

Sec. 23-373. Administration.

(a) Duties and responsibilities of the floodplain administrator. Duties and responsibilities of the floodplain administrator or designee shall include, but not be limited to, the following:

- (1) Maintain and hold open for public inspection all records pertaining to the provisions of these regulations.
- (2) Review applications for proposed development to determine whether proposed building site, including the placement of manufactured homes, will be reasonably safe from flooding.
- (3) Review, approve or deny applications for earth change permits required by adoption of these regulations.
- (4) Review applications for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies (including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 USC 1334) from which prior approval are required.
- (5) Notify, in riverine situations, adjacent communities and the state coordinating agency, the state water resources board, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
- (6) Ensure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.
- (7) When base flood elevation data has not been provided in accordance with section 23-372(b), the floodplain administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source, in order to administer the provisions of section 23-374.
- (8) When a regulatory floodway has not been designated, the floodplain administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within zones A1—30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood.
- (9) Become accredited by the state water resources board in accordance with 82 O.S. §§ 1601—1618, as amended.
- (10) After a disaster or other type of damage occurrence to structure in the city, secure determination if the residential, nonresidential structures and manufactured homes have been substantially damaged and enforce the substantial improvement requirement.



(b) Permit requirements. Any development proposed within the regulatory floodplain will require an earth change permit as described in chapter 35. The following information is also required in addition to the other earth change permit requirements:

- (1) Elevation (in relation to NAVD 88), of the lowest floor (including basement) of all new and substantially improved structures;
- (2) Elevation (in relation to NAVD 88) to which any nonresidential structure shall be floodproofed;
- (3) A certificate from a licensed professional engineer or architect that the nonresidential floodproofed structure shall meet the floodproofing criteria of section 23-374(b)(2);
- (4) Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

(c) Approval or denial. Approval or denial of an earth change permit for proposed development within the floodplain shall be based on all of the provisions of these regulations and the following relevant factors:

- (1) The danger to life and property due to flooding or erosion damage;
- (2) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (3) The danger that materials may be swept onto other lands to the injury of others;
- (4) The compatibility of the proposed use with existing and anticipated development;
- (5) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (6) The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
- (7) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;
- (8) The necessity to the facility of a waterfront location, where applicable;
- (9) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- (10) The relationship of the proposed use to the comprehensive plan and zoning for that area.

(d) Variance and appeal procedures.

- (1) The board of drainage appeals as established in section 35-57 shall serve as the floodplain board and shall hear and render judgment on requests for variances from the requirements of this article.
- (2) The board of drainage appeals shall hear and render judgment on an appeal only when it is alleged there is an error in any requirement, decision, or determination made in the enforcement or administration of this article.
- (3) Any person seeking a variance or wanting to appeal a decision shall submit to the board of drainage appeals a completed variance/appeal application form accompanied by a fee set by a resolution of the city council.



- (4) Any person aggrieved by the decision of the board of drainage appeals may appeal such decision to the district court of the county.
- (5) The floodplain administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.
- (6) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places, without regard to the procedures set forth in the remainder of these regulations.
- (7) Upon consideration of the factors noted above and the intent of these regulations, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of these regulations (section 23-370(c)).
- (8) Variances shall not be issued within any designated floodway unless it is demonstrated that no increase in flood levels during the base flood discharge would result.
- (9) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (10) The following are prerequisites for granting variances:
- a. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - b. Variances shall only be issued upon:
 1. Showing a good and sufficient cause;
 2. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
 3. 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 on or victimization of the public, or conflict with existing local laws, regulations or ordinances.
 - c. Any variance from the requirements of this article shall in no way relieve the applicant from the requirements of section 23-370.
- (11) Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:
- a. The criteria outlined in subsection (c)(1)—(8) of this section are met, and
 - b. The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.
- (12) A copy of any variance issued shall be sent to the OWRB within in 15 days of issuance.
- (d) Map change procedures. Changes to the boundaries of a floodplain, floodway, flood insurance zone, flood elevation, flood depth and other information shown on the officially adopted floodplain maps must be approved by the Federal Emergency Management Agency (FEMA) through the letter of map revision



(LOMR) or letter of map amendment (LOMA) process. The map revision process is also applicable to conditional approvals of revisions that are based on proposed modifications of stream channels and floodplains, proposed elevations for individual structures, or conditions that are expected to exist in the future. All requests for a LOMR must be made through and approved by the floodplain administrator. Technical data supporting the request must be included with the submittal.

(Ord. No. 3023, § 1(23.373), 3-3-2008)

Sec. 23-374. Provisions for flood hazard reduction.

(a) General standards. In all areas within the floodplain the following provisions are required for all new construction, substantial improvements, or other development:

- (1) All new construction, substantial improvements, or other development shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (2) All new construction, substantial improvements, or other development shall be constructed by methods and practices that minimize flood damage;
- (3) All new construction, substantial improvements, or other development shall be constructed with materials resistant to flood damage;
- (4) All new construction, substantial improvements, or other development shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities located 12" above the base flood elevation so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (5) All new construction, substantial improvements, or other development shall be accomplished without causing an adverse impact to other properties;
- (6) Compensatory storage shall be provided for any fill within the floodplain.

(b) Specific standards. In all areas within the floodplain where base flood elevation data has been provided as set forth in subsection (c)(3) of this section, section 23-372(b) or 23-373(a)(8), the following provisions are required:

- (1) Residential construction. New construction and substantial improvement of any residential structure shall have the lowest floor (including basement and electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities), elevated 12 inches above the base flood elevation. A licensed professional engineer or land surveyor shall submit a certification to the floodplain administrator that the standard of this subsection, is satisfied.
- (2) Nonresidential construction. New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated 12 inches above the base flood level as certified by a licensed professional engineer or land surveyor, or together with attendant utility and sanitary facilities, be designed so that below the elevation 12 inches above the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A licensed professional engineer or architect shall develop and/or review structural



design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. The floodplain administrator shall maintain a record of all floodproofing certifications that includes the specific elevation (in relation to mean sea level) to which each structure has been floodproofed.

(3) Enclosures. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a licensed professional engineer or architect or meet or exceed the following minimum criteria:

- a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
- b. The bottom of all openings shall be no higher than one foot above grade.
- c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(4) Manufactured homes.

a. All manufactured homes to be placed within zone A on the FIRM shall be installed using methods and practices that minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

b. Manufactured homes that are placed or substantially improved within zones A1—30, AH, and AE on the FIRM shall be elevated on a permanent foundation such that bottom of the lowest structural support (I-beam), electrical, heating, ventilation, plumbing, air conditioning equipment and other service facilities of the manufacture home is elevated 12 inches above the base flood elevation as certified by a licensed professional engineer or land surveyor and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

(5) Recreational vehicles. All recreational vehicles placed on sites within zones A, A1—30, AH, and AE on the community's FIRM shall either:

- a. Be on the site for fewer than 180 consecutive days;
- b. Be fully licensed and ready for highway use; or
- c. Meet the permit requirements of section 23-373(b), and the elevation and anchoring requirements for manufactured homes in subsection (b)(4) of this section. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(6) Accessory structure. Accessory structures may be allowed within zones A, A1—30, AH, and AE on the FIRM subject to the following criteria:

- a. Structure shall not exceed 200 square feet in size.
- b. Structure shall be unfinished on the interior.



- c. Structure shall not be used for human habitation (including work, sleeping, living, cooking, or restroom areas).
 - d. Service facilities such as electrical and heating equipment must be elevated to or above the BFE or floodproofed.
 - e. Structure is constructed and placed on building site so as to offer the minimum resistance to the flow of floodwaters.
 - f. Structure is designed to have low flood damage potential (i.e., constructed with flood resistance materials).
 - g. Structure is firmly anchored to prevent flotation, collapse and lateral movement.
 - h. Accessory structures shall not be located within the regulatory floodway.
 - i. Openings to relieve hydrostatic pressure during a flood shall be provided below the base flood elevation (BFE).
 - j. Structure is to be located so as not to cause damage to adjacent and nearby structures.
- (c) Standards for subdivision proposals.
 - (1) All subdivision proposals shall be consistent with section 23-370(b), (c) and (d).
 - (2) All proposals for the development of subdivisions shall meet the permit requirements of section 23-373(b) and the provisions of this section.
 - (3) Base flood elevation data shall be generated for subdivision proposals and other proposed development which is greater than 50 lots or five acres, whichever is less, if not otherwise provided pursuant to section 23-372(b) or 23-373(b)(8).
 - (4) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.
 - (5) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.
 - (d) Standards for areas of shallow flooding (AO/AH zones). Located within the floodplain established in section 23-373(b), are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flows may be evident. Such flooding is characterized by ponding or sheet flow; therefore, the following provisions apply:
 - (1) All new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated 12 inches above the depth specified on the FIRM or 36 inches above the highest adjacent grade if no depth number is specified.
 - (2) All new construction and substantial improvements of nonresidential structures:
 - a. Have the lowest floor (including basement) elevated 12 inches above the depth specified on the FIRM or 36 inches above the highest adjacent grade if no depth number is specified; or



b. Together with attendant utility and sanitary facilities, shall be designed so that below the elevation 12 inches above the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

(3) A licensed land surveyor or licensed engineer shall submit a certification to the floodplain administrator that the standards of this section are satisfied.

(4) Require within zones AH or AO adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(e) Floodways. Floodways located within the floodplain established in section 23-372(b), are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles and erosion potential, the following provisions shall apply:

(1) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway except for:

a. Work for the purpose of constructing, repairing, or maintaining any street, utility facility including any service lines related thereto, or any recreational park facility which when completed results in no adverse impact; and

b. Maintenance of stormwater drainage facilities that does not diminish the design capacity of a drainage system.

(2) Under the provisions of 44 CFR ch. 1, § 65.12, of the National Flood Insurance regulations, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the developer or community first obtains a conditional FIRM and floodway revision CLOMR through FEMA.

(3) If subsection (e)(1) or (2) of this section is satisfied, all new construction and substantial improvements within the floodway shall comply with all applicable flood hazard reduction provisions of this section.

(Ord. No. 3023, § 1(23.374), 3-3-2008; Ord. No. 3470, § 1, 2-1-2021)

Sec. 23-375. Penalties for noncompliance.

Violation of the provisions of this article other than the discharge of stormwater shall constitute a Class C offense as defined in section 1-14. Violations of the provisions of this article which result in damage due to the discharge of stormwater shall constitute a Class D offense as defined in section 1-14. Nothing herein contained shall prevent the city from requiring or taking such other lawful action as is necessary to prevent or remedy any violation.

(Ord. No. 3023, § 1(23.375), 3-3-2008)

Secs. 23-376—23-384. Reserved.



A.2. Article XIX – Stormwater Management Regulations for Land Development Projects

ARTICLE XIX. STORMWATER MANAGEMENT REGULATIONS FOR LAND DEVELOPMENT PROJECTS

Sec. 23-385. General requirements.

- (a) All land development projects shall be subject to the provisions of this article, this Code, the city drainage standards, the city standards, and all applicable state and federal regulations.
- (b) When no land use action is required, a final drainage study and a drainage plan must be accepted prior to issuance of a building permit unless explicitly waived based on provisions in the sections set forth in this article.

(Ord. No. 3023, § 1(23.385), 3-3-2008)

Sec. 23-386. Drainage studies and drainage plans.

- (a) **Submittals—Required.** Drainage studies and drainage plans are required to demonstrate compliance with this Code, the city drainage standards and city standards. The type of land development application dictates the required submittals as shown in the table in subsection (b) of this section. All submittals shall be signed and sealed by a professional engineer licensed by the state.
- (b) **Same—Enumerated.** The required submittals are as follows:

Required Submittal	Application Type
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Preliminary drainage study	Preliminary plat, preliminary planned unit development
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Final drainage study	Final plat, SUP, final planned unit development, commercial use by right, earth change permit
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Drainage plan	Final plat, SUP, final planned unit development, commercial use by right, earth change permit
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Record drawings	Upon completion of the drainage improvements and prior to issuance of certificate of occupancy and use or occupancy of a site, development, or other improvement
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- (c) Amendment to PUD requires final drainage study. A minor amendment to a final planned unit development shall require the submittal of an amended final drainage study and drainage plan if the minor amendment creates any change to the hydrologic or drainage characteristics of the land development project.

- (d) **Administration.** Processing of a properly completed submittal shall be in accordance with chapter 35. Any changes to an accepted drainage study or plan must be reviewed by the city prior to construction of a field change. Minor revisions shall require a written request for the change with any supporting documentation. All preliminary drainage studies, final drainage studies, and drainage plans that are not



signed and sealed by a professional engineer licensed by the state will not be reviewed and the entire application will be returned to the applicant.

(e) Drainage report and plan contents. All reports and plans must be signed, sealed, and dated by a professional engineer with certification that the report and plan is in compliance with good engineering practice and the requirements of this Code.

(1) Cover letter required. A cover letter shall accompany all submittals and include the following:

a. Summary statement identifying and characterizing (location, area of project in acres, and proposed land use) the proposed land development project and discussing how the project will adhere to the requirements of this Code.

b. Brief description of drainage system components, the overall concept of the proposed drainage system, and its interaction with existing drainage facilities.

c. Policy statement discussing the design criteria and any proposed deviation from methodology, as set forth by this Code.

(2) Preliminary drainage study. The report submitted as a preliminary drainage study shall be formatted in accordance with the following outline and contain all of the information listed:

a. Project location map and information. The project location map shall contain the following information:

1. Map with township, range, section, quarter section.
2. Name and address of property owner.
3. Legal description of property.
4. Streets within and adjacent to the project.
5. Names of surrounding developments.

b. Existing drainage map. The existing drainage map shall show the following:

1. Drainage area map at a scale of one inch equals 20 feet to one inch equals 100 feet identifying all predevelopment drainage basins and subbasins within and that contribute flow through or across the proposed land development project.
2. Existing land use and predominant cover type (shrubs, trees, grass).
3. Identify all existing basins and discharge points with unique alphanumeric labels, list area of each basin in acres, and list runoff coefficients or curve numbers appropriate for the existing land use.
4. Existing contours at two-foot maximum intervals for all basins and subbasins.
5. Limits of floodplain and floodway located within or adjacent to (within 75 feet of the property) the proposed land development project.
6. Existing drainage facilities within and adjacent to the proposed land development project to a point 25 feet beyond the property line, or to a greater distance as may be required to reveal influencing features or features which may be influenced by the proposed development.



7. Location, size and type of easements within and adjacent to the proposed land development project.
- c. Proposed drainage map. The proposed drainage map shall show the following:
 1. Drainage area map at same scale as existing drainage map identifying all proposed (post-development) drainage basins and subbasins and existing basins that will not be altered.
 2. Identify all proposed basins and proposed discharge points with unique alpha-numeric labels, list area of each basin in acres, and list runoff coefficients or curve numbers appropriate for the proposed land use.
 3. Existing and proposed contours at two-foot maximum intervals for all basins and subbasins.
 4. Limits of floodplain and floodway located within or adjacent to (within 75 feet of the property) the proposed land development project.
 5. Existing drainage facilities to remain and proposed drainage facilities within and adjacent to (within 25 feet of the property) the proposed land development project.
 6. Existing and proposed easements within and adjacent to (within 25 feet of the property) the proposed land development project.
- d. Hydrology and hydraulics. The hydrology and hydraulics shall show the following:
 1. A written summary of the existing drainage patterns and off-site drainage patterns and impact on the proposed development.
 2. A summary table of the following:
 - (i) Existing (predevelopment) hydrologic characteristics, including, but not limited to, discharge points, basin areas, soil types, runoff coefficients, curve numbers, hydraulic lengths, and time of concentration values; and
 - (ii) Assumptions, including a written description of the basis for each assumption used in the calculations.
 3. A summary table of hydrologic analysis results for all of the basins and subbasins based on existing conditions for the minor and major storm events.
 4. A written general description of the proposed stormwater drainage facilities and methods for controlling the post-development drainage including the proposed locations of stormwater drainage facilities required to mitigate any potential adverse impacts.
 5. A summary table comparing existing and proposed peak flow rates at each discharge point for the minor and major storm events.
 6. Design rainfall data used for minor and major storms.
 7. Hydraulic capacity calculations for all existing drainage facilities that currently serve or will serve the proposed land development project.
 8. Volumetric computations for compensatory storage requirements for any alterations of the floodplain.



(3) Final drainage study. The report submitted as a final drainage study shall include a final drainage plan, shall be formatted in accordance with the following outline, and shall contain all information listed for a preliminary drainage study in addition to the following information:

- a. Drainage facility design. The drainage facility design shall show the following:
 1. Certification statement shall be in conformance with section 35-109.
 2. A summary table of the following:
 - (i) Post-development hydrologic characteristics, including but not limited to discharge points, basin areas, soil types, runoff coefficients, curve numbers, hydraulic lengths, and time of concentration values); and
 - (ii) Assumptions, including a written description of the basis for each assumption used in the calculations.
 3. A summary table of hydrologic analysis results for all of the basins and subbasins based on proposed (fully developed) conditions for the minor and major storm events.
 4. A summary table of hydraulic capacity calculations for all proposed drainage facilities, including but not limited to streets, storm inlets, storm sewers, drainage channels, swales, culverts, and on-site or regional detention facilities, that will serve the proposed development project (on-site and off-site) or convey pass through runoff from upstream or off-site basins and subbasins.
- b. Conclusions.
 1. A written summary statement indicating compliance with this Code, the city drainage standards and the city standards, as well as any accepted drainage plans, where applicable.
 2. A detailed statement concerning the projected effects of the proposed land development project on property adjoining the site and on existing drainage facilities and systems both on and off-site.
- c. References. List all design criteria and technical information used.
- d. Appendices. The appendices shall contain the following:
 1. Land use assumptions regarding adjacent properties.
 2. Time of concentration flow path characteristics and calculations.
 3. Runoff calculations at specific design points on site and off-site.
 4. Historic and fully developed runoff computations at points of compliance.
 5. Hydrographs at critical design points, if applicable.
 6. Culvert capacity charts.
 7. Storm sewer capacity calculations.
 8. Street capacity calculations.
 9. Storm inlet capacity calculations.
 10. Open channel design calculations.



11. Grade control and/or channel drop design.
 12. Detention area/volume capacity and outlet capacity calculations (stage-storage-discharge table).
 13. Routing of off-site drainage flow through the development, easements, and/or right-of-way dedications.
 14. Location/alignment of watercourse and the appropriate hydraulic analysis for any alteration of a watercourse.
 15. Hydraulic analysis for compensatory storage requirements for any alterations of the floodplain.
 16. Detention facility outlet details and maintenance plan.
 17. All appropriate FEMA submittal data and application for a LOMR, if applicable.
- (4) Final drainage plan.
- a. A drainage plan must contain a general location map in sufficient detail to identify all surface drainage entering and leaving the development and general drainage patterns. The map should be at a scale of one inch equals 200 feet up to one inch equals 2,000 feet and show the path of all drainage from the upper reach of any off-site basins to the defined major drainageways.
 - b. All final drainage plans submitted for final acceptance shall include the certifications as stated in section 35-109.
 - c. Maps of the proposed development at a scale of one inch equals 20 feet to one inch equals 100 feet on a full size drawing (22 inches by 34 inches) oriented in plan view with north arrow and scale shall be included with the drainage plan. The plan shall show the following:
 1. Existing and proposed contours at one-foot maximum intervals.
 2. Spot elevations and drainage arrows at all grade breaks within the development and at all locations where proposed surface improvements tie into existing grade around the perimeter of the property. In every instance, the plan shall include topography a minimum of 75 feet beyond the limits of proposed development.
 3. Property lines, easements, and common areas with purposes noted.
 4. Streets, roads, and highways adjacent to the property.
 5. Overall drainage area boundary and drainage sub-area boundaries identified by bold, dashed lines.
 6. Existing drainage facilities and structures, natural or manmade, including roadside ditches, drainageways, gutter flow directions, and culverts. All pertinent information such as material, size, shape, slope and location shall also be included.
 7. Proposed storm sewers and open drainageways, including inlets, manholes, culverts, retaining walls, erosion control measures, and other appurtenances.
 8. Drainage arrows indicating individual lot grading patterns shall be clearly illustrated. Surface drainage from the lesser of three residential lots or three acres is allowed to combine before entering stormwater drainage facilities designed to collect and transport surface drainage.



9. Proposed discharge points for runoff from the project area and all facilities designed to convey flows to the final outfall point without adverse effects to downstream property.
 10. The on-site 100-year flood elevations and the limits of regulatory floodway, floodplain and/or water surfaces. In every instance, the plan shall include a determination of the 100-year water surface elevation and the area of inundation based on routing off-site drainage flow through the development for a 100-year 24-hour storm.
 11. Location and elevation of all existing and proposed utilities affected by or affecting the drainage design.
 12. Details for the construction of all proposed stormwater drainage facilities at a scale sufficient to demonstrate conformance with city drainage standards and city standards shall be included. Details shall include, but not be limited to, plan and profile view of all drainage facilities, culvert and underground pipe trench details, detention storage and outlet details, street inlet details, low-flow concrete swale and curb cut details and channel and swale standard cross sections.
 13. Water surface profiles for the major storm shall be computed using standard backwater analysis (taking into consideration all losses due to changes in velocity, drops, bridge openings, culverts, and other obstructions) and delineated in the profile view of all channels and drainage facilities.
 14. The existing and proposed surface area (in units of square feet) of impervious materials for nonresidential land development projects shall be calculated and included in tabular form for proper assignment of equivalent residential units (ERUs) for drainage fees.
 15. When construction is phased or when temporary facilities are used, an outline of the sequence of construction activities shall be provided that notes when the various aspects of the drainage study will be implemented.
- (5) Record drawings. Record drawings shall be in compliance with chapter 35 and must be prepared at a scale of one inch equals 20 feet to one inch equals 100 feet on a full size drawing (22 inches by 34 inches) oriented in plan view. The as-built plan shall be clearly titled "as-built" or "record drawing" and contain all information shown on the accepted final drainage plan with any changes noted by striking through the proposed design values and clearly labeling as-built values as such.

(Ord. No. 3023, § 1(23.386), 3-3-2008; Ord. No. 3091, § 4, 1-25-2010; Ord. No. 3246, § 3, 12-16-2013)

Secs. 23-387—23-399. Reserved.



Appendix B Planning Process Documentation

Information presented in this appendix pertains to documentation detailing participation in the planning process and can be used as evidence of participation in the 2025 City of Stillwater Hazard Mitigation Plan. All meeting sign-in sheets, promotional materials, an extensive list of participants who participated in the planning process in one form or another, and public outreach and engagement activities are included herein.



Figure B-1 Stakeholder Welcome Guide

2025 Hazard Mitigation Plan Update City of Stillwater

Welcome!

On behalf of the City of Stillwater, welcome to the 2025 Hazard Mitigation Planning Group! Your input and participation are critical to the success of updating the 2020 plan, and we hope we can count on your assistance during this process over the next several months.



Hazard Mitigation Plans (HMPs) are FEMA-approved documents that provide jurisdictional benefits on many fronts, one of which is eligibility for certain funding opportunities over the next five years. To satisfy FEMA requirements, a variety of topics will be discussed over the coming months, many of which will rely on input from stakeholders and community members such as yourself. Beginning in April, there will be two Stakeholder Workshop meetings. Your attendance at these workshops is critical to providing a complete picture of how hazards impact the City, and how we can build a more resilient and sustainable community during future disasters. Development of this plan begins with stakeholders and local representatives coming together to identify and discuss natural hazard risks and vulnerabilities in your area. Additionally, we will be identifying actions to mitigate future disaster damage.

The City of Stillwater is excited to be partnering with WSB (formerly Meshek and Associates), and our collective efforts will develop a comprehensive multi-hazard mitigation plan. Expect to receive a calendar invite for two Stakeholder Workshops shortly. Reminders will be sent one week prior to each meeting.

Stakeholder Meeting 1 - What to expect:

Topics of discussion will include:

- A hazard impact survey
- A review and modification of the goals outlined in 2020
- Description and ranking of hazards profiled
- Identification of capabilities and vulnerabilities
- Changes in FEMA Requirements for Hazard Mitigation Plans, and how they will be addressed in this Plan Update – Part 1
- Status update of Action Items from the 2020 Plan
- Discussion and Proposal of new Action Items
- How GIS mapping can complement and enhance preparedness

How to prepare:

You will be encouraged to share examples of capabilities, vulnerabilities, and needs from your perspective. When you think of your jurisdiction, what keeps you awake at night? What is your most pressing concern for your community? For example, if you are a local fire district, a capability could be an examination of your personnel. Do you have enough personnel to oversee all expected disasters? A vulnerability in this case could be that your fire district has many plots of overgrown vegetation near residential areas. Your capabilities and vulnerabilities will drive needs and mitigation projects. In this case, you may need additional personnel or a service that maintains overgrown plots of land, especially near structures.



Stakeholder Meeting 2 What to expect:

Topics of discussion will include:

- Survey (for anyone who has not had an opportunity to complete it)
- Recap of outcomes from Stakeholder Workshop 1
- Additional discussion of capabilities and vulnerabilities
- Overview of the Plan adoption process
- Changes in FEMA Requirements for Hazard Mitigation Plans, and how they will be addressed in this Plan Update – Part 2
- Presentation of work-to-date completed in the Plan

Based on their findings from your insight and other sources, the planning team will outline all hazards and pinpoint their effects across the planning area.

How to prepare:

What are the specific areas in your community that experience a hazard, or the effects of a hazard, more frequently or more severely? For example: is there an area that floods more often? Are there more fires in a specific area? Does the power go out more frequently in an area after a high wind, a tornado, or a severe winter storm? What is the condition of the roads after a severe winter storm? How well is your community equipped to manage these things? What tools and resources would help your community handle these things better?

Meeting locations and times are in the process of being secured. Invitations for each meeting will be sent via email once they have been scheduled. Participants at each meeting are encouraged to join us in person.

Should you have any questions or concerns, please feel free to reach out at any time to myself, Rob Hill (rob.hill@stillwaterok.gov) or to the WSB Planning Department Manager, Allison Whitsitt (allison.whitsitt@wsbeng.com), or our lead planner for this project, Archie Losey (archie.losey@wsbeng.com). Thank you for your time, and we look forward to seeing each of you at our first meeting!





Figure B-2 Project Kickoff Meeting Agenda



2025 Hazard Mitigation Plan Update
Kickoff Meeting Agenda
Stillwater Emergency Operations Center
3.12.2025 1:30 p.m. - 3:30 p.m.

1. Opening
2. Planning Process Overview
3. Action Item Discussion
4. Stillwater's vision for project outcomes
5. HMP CRS benefits and requirements
6. Capabilities discussion and supporting documentation
7. Establish communication chain
8. Identify Core Group members and Stakeholders
9. GIS discussion
10. 2023 FEMA PRT Guidance changes
 - A. Element A
 - B. Element C
 - C. Element D
 - D. Element E
 - E. Other changes
11. Next Steps
12. Closing



Figure B-3 Project Kickoff Meeting Sign-In Sheet



**City of Stillwater
2025 Hazard Mitigation Plan Update
Kickoff Meeting Sign-In Sheet
Wednesday, March 12, 2025, 1:30 p.m. to 3:30 p.m.**



Name	Title	Organization	Email
Rob Hill	Director	SEMA	rob.hill@stillwaterok.gov
Allison Whitsitt	Director, Emergency Management and Disaster Consulting	WSB	allison.whitsitt@wsbeng.com



Figure B-4 Stakeholder Workshop/Core Group Meeting 1 Promotional Flyer

2025 City of Stillwater Hazard Mitigation Plan

PUBLIC INPUT REQUESTED



Your input is needed as the City of Stillwater is updating your Hazard Mitigation Plan (HMP)! Over the next few months, the HMP will be re-assessing risks posed by natural hazards on the people and infrastructure throughout the City, and as residents, your feedback is requested on behalf of City of Stillwater Emergency Management. The goal of the 2025 HMP Update is to identify mitigation strategies that will help protect your community from future disasters. YOUR participation is the foundation to this Plan.

You can help by scanning the QR code below, or by entering this URL into your browser: <https://arcg.is/18SKS1>

Our first meeting will take place on April 3, 2025, at 1:30pm in the Stillwater Community Center, #121. Please consider joining your community's leaders as we forge ahead and make Stillwater more resilient. We look forward to seeing you!





Figure B-5 Stakeholder Workshop/Core Group Meeting 1 Agenda



2025 Hazard Mitigation Plan Update
Stakeholder/Core Group Meeting #1 Agenda
4.3.2025 1:30-3:30pm

1. Welcome
2. Why Hazard Mitigation?
3. 2023 FEMA Requirement Update
4. 2025 Goals Discussion
5. Hazard Ranking Survey
6. Capabilities & Vulnerabilities Discussion
7. 2020 Action Item Review
8. Discussion of new Action Items
9. GIS Mapping
10. Grant Funding
11. Next Steps and Closing Remarks





Figure B-6 Stakeholder Workshop/Core Group Meeting 1 Sign-In Sheets

MEETING SIGN-IN SHEET		2025 COS/SPS HAZARD MITIGATION PLAN	
Project: COS/SPS - 2025 Hazards Mitigation Meeting		Meeting Date: Thursday, April 3, 2025 1:30-3:30pm	
Facilitator: City of Stillwater Emergency Management		Place/Room: Stw Community Center – Rm 119	
Initials	Name	Department	E-Mail
AZ	Alane Zannotti	Chamber of Commerce	alane@stillwaterchamber.org
	Alexander Greenwich	Payne County Health Department	Alexander.greenwich@ok.health.gov
AW	Allison Whitsitt	WSB	Allison.whitsitt@wsbeng.com
	Anita Kaufman	Payne County Conservation District	payneccd@conservation.ok.gov
	Archie Losey	WSB	Archie.losey@wsbeng.com
BCB	Barbara Bliss	Parks/Community Resources	Barbara.bliss@stillwaterok.gov
BM	Bill Millis	Engineering	Bill.millis@stillwaterok.gov
	Billy Treadwell	Stillwater Medical Center	wtreadwell@stillwater-medical.org
BT	Bo Gamble	Stillwater Public Schools	bgamble@stillwaterschools.com
BS	Brad Stewart	Information Technology	Brad.stewart@stillwaterok.gov
BH	Brandon Halcomb	Stillwater Fire	Brandon.halcomb@stillwaterok.gov
	Brenden Pope	COS-EM	Brenden.pope@stillwaterok.gov
CS	Candy Staring	Engineering	Candy.staring@stillwaterok.gov
	Chris Franks	Environmental	Chris.franks@stillwaterok.gov
CD	Christy Driskel	City Manager's Office	Christy.driskel@stillwaterok.gov
CM	Cody Manuel	Stillwater Police	Cody.manuel@stillwaterok.gov
	Cristy Morrison	Visit Stillwater	cristy@visitstillwater.org
DLR	Dan Ray	OSU-EM	Dan.ray@okstate.edu
	Daniel Nack	Payne County Sheriff	dnack@sheriff.paynecountyok.gov



Initials	Name	Department	E-Mail
DBB	David Barth	Development Services	David.barth@stillwaterok.gov
DC	David Casey	COS-EM	David.casey@stillwaterok.gov
DD	Dawn Dodson	Marketing	Dawn.dodson@stillwaterok.gov
JD	James Driskel	Water Utilities	James.driskel@stillwaterok.gov
JM	Jeff Matthews	Code Enforcement	Jeff.matthews@stillwaterok.gov
JS	Jim Scott	Parks/Community Resources	Jim.scott@stillwaterok.gov
	Jun Gao	GIS	Jun.gao@stillwaterok.gov
KR	Kellie Reed	Stillwater Regional Airport	Kellie.reed@stillwaterok.gov
	Lisa Robinson	Oklahoma Department of EM	Lisa.robinson@oem.ok.gov
LA	Logan Anderson	ODOT	landerson@odot.org
LS	Loren Smith	Stillwater Electric Utility	Loren.smith@stillwaterok.gov
MW	Mark White	Public Works	Mark.white@stillwaterok.gov
MF	Matt Faulkner	Waste Management	Matt.faulkner@stillwaterok.gov
PT	Pierce Taylor	Payne County EM	Pierce.taylor@pcem.paynecountyok.gov
RL	Rachael Condley	Our Daily Bread	director@ourdailybreadstillwater.org
RW	Rachel Wasserman	Animal Welfare	Rachel.wasserman@stillwaterok.gov
RH	Rob Hill	COS-EM	Rob.hill@stillwaterok.gov
RA	Russell Andrews	Environmental	Russell.andrews@stillwaterok.gov
ST	Sara Thomas	COS-EM	Sara.thomas10@okstate.edu
	Seth Condley	Payne County Commissioner #2	scondley@paynecountyok.gov
TE	Terry Essary	Stillwater Fire	Terry.essary@stillwaterok.gov
	Wendi Lemons	WSB	Wendi.lemons@wsbeng.com



Initials	Name	Department	E-Mail
	Wes Bennett	Stillwater Electric Distribution	Wesley.bennett@stillwaterok.gov
ZH	Zack Henson	Watershed Quality Manager	Zack.henson@stillwaterok.gov
Guests			
	Thomas Tharp	Fire	Thomas.Tharp@stillwaterok.gov
	Jonathan Harold	ODOT	Jharold@odot.org
	BRANTLEY HENDREX	ODOT	BNENDREX@ODOT.ORG
	Dustin Portman	Fire	dustin.portman@stillwaterok.gov
	Bill Mills		
	David Barth		
	Zack Henson		
	Matt Mitchell	ODOT	mmitchell@odot.org
	Jim Scott	Parks/Community Resources	jim.scott@stillwaterok.gov
	BARBARA BLISS	PARKS / C R	BARBARA.BLISS@STILLWATEROK.GOV
	Karen Wera	Comm.	Karen.Wera@okstate.edu
	KEVIN CLARK	City Council	COUNCILOR CLARK@STILLWATEROK.GOV



MEETING SIGN-IN SHEET 2025 COS/SPS HAZARD MITIGATION PLAN

Project:	COS/SPS - 2025 Hazards Mitigation Meeting	Meeting Date:	Thursday, April 3, 2025 1:30-3:30pm
Facilitator:	City of Stillwater Emergency Management	Place/Room:	Stw Community Center – Rm 119

Initials	Name	Department	E-Mail
	Alane Zannotti	Chamber of Commerce	alane@stillwaterchamber.org
	Alexander Greenwich	Payne County Health Department	Alexander.greenwich@ok.health.gov
	Allison Whitsitt	WSB	Allison.whitsitt@wsbeng.com
	Anita Kaufman	Payne County Conservation District	payneccd@conservation.ok.gov
	Archie Losey	WSB	Archie.losey@wsbeng.com
	Barbara Bliss	Parks/Community Resources	Barbara.bliss@stillwaterok.gov
	Bill Millis	Engineering	Bill.millis@stillwaterok.gov
	Billy Treadwell	Stillwater Medical Center	wtreadwell@stillwater-medical.org
	Bo Gamble	Stillwater Public Schools	bgamble@stillwaterschools.com
	Brad Stewart	Information Technology	Brad.stewart@stillwaterok.gov
	Brandon Halcomb	Stillwater Fire	Brandon.halcomb@stillwaterok.gov
	Brenden Pope	COS-EM	Brenden.pope@stillwaterok.gov
	Candy Staring	Engineering	Candy.staring@stillwaterok.gov
	Chris Franks	Environmental	Chris.franks@stillwaterok.gov
	Christy Driskel	City Manager's Office	Christy.driskel@stillwaterok.gov
	Cody Manuel	Stillwater Police	Cody.manuel@stillwaterok.gov
	Cristy Morrison	Visit Stillwater	cristy@visitstillwater.org
	Dan Ray	OSU-EM	Dan.ray@okstate.edu
	Daniel Nack	Payne County Sheriff	dnack@sheriff.paynecountyok.gov



Initials	Name	Department	E-Mail
	David Barth	Development Services	David.barth@stillwaterok.gov
	David Casey	COS-EM	David.casey@stillwaterok.gov
	Dawn Dodson	Marketing	Dawn.dodson@stillwaterok.gov
	James Driskel	Water Utilities	James.driskel@stillwaterok.gov
	Jeff Matthews	Code Enforcement	Jeff.matthews@stillwaterok.gov
	Jim Scott	Parks/Community Resources	Jim.scott@stillwaterok.gov
	Jun Gao	GIS	Jun.gao@stillwaterok.gov
	Kellie Reed	Stillwater Regional Airport	Kellie.reed@stillwaterok.gov
	Lisa Robinson	Oklahoma Department of EM	Lisa.robinson@oem.ok.gov
	Logan Anderson	ODOT	landerson@odot.org
	Loren Smith	Stillwater Electric Utility	Loren.smith@stillwaterok.gov
	Mark White	Public Works	Mark.white@stillwaterok.gov
	Matt Faulkner	Waste Management	Matt.faulkner@stillwaterok.gov
	Pierce Taylor	Payne County EM	Pierce.taylor@pcem.paynecountyok.gov
PC	Rachael Condley	Our Daily Bread	director@ourdailybreadstillwater.org
RW	Rachel Wasserman	Animal Welfare	Rachel.wasserman@stillwaterok.gov
RH	Rob Hill	COS-EM	Rob.hill@stillwaterok.gov
	Russell Andrews	Environmental	Russell.andrews@stillwaterok.gov
	Sara Thomas	COS-EM	Sara.thomas10@okstate.edu
	Seth Condley	Payne County Commissioner #2	scondley@paynecountyok.gov
	Terry Essary	Stillwater Fire	Terry.essary@stillwaterok.gov
	Wendi Lemons	WSB	Wendi.lemons@wsbeng.com



Figure B-7 Planning and Technology Core Group Meeting Agenda



2025 City of Stillwater Hazard Mitigation Plan Update Planning/Technology Group Meeting Agenda

May 27, 2025 – 10:00am -11:30am
Microsoft Teams

1. Welcome
2. Hazard Occurrences since 2020
 - a. Dam/Levee Incidents
 - b. Wildfire
 - c. Expansive Soils
 - d. Hazardous Materials
3. Capabilities Discussion – City/School Plans, Boomer Creek MDP
4. Action Items Discussion
 - a. Review of 2020 Action Items
 - b. Discuss new/suggested Action Items
5. Public Education and Outreach for Planning Process
6. Stakeholder Workshop 2 Preview
7. Bent Ear/GIS Presentation & Discussion
8. Closing



Figure B-8 Planning and Technology Core Group Meeting Sign-In Sheets



City of Stillwater
2025 Hazard Mitigation Plan Update
Planning & Technology Group Meeting #1 Sign-In Sheet
 Thursday, May 29, 2025, 10:00 a.m. to 11:30 a.m.
 Microsoft Teams



Name	Organization	Title	Email
Archie Losey	WSB	Hazard Mitigation Planner	archie.losey@wsbeng.com
Rob Hill	City of Stillwater Emergency Management	Director of Emergency Management	rob.hill@stillwaterok.gov
Brenden Pope	City of Stillwater Emergency Management	Deputy Director of Emergency Management	brenden.pope@stillwaterok.gov
Gena Barnwell	WSB	GIS Analyst	gena.barnwell@wsbeng.com
Wesley Bennett	City of Stillwater	Watershed Quality Manager	wesley.bennett@stillwaterok.gov
Terry Essary	Stillwater Fire Department	Fire Chief	terry.essary@stillwaterok.gov
Brad Stewart	City of Stillwater Information Technology	Director of Information Technology	brad.stewart@stillwaterok.gov
Wendi Lemons	WSB	Senior Grants Project Manager	wendi.lemons@wsbeng.com
Matt Faulkner	City of Stillwater Waste Management	Director	matt.faulkner@stillwaterok.gov
Greg Brunelle	Bent Ear Solutions	Director – Business Partnerships	gbrunelle@bent-ear.com
Samantha Phillips	Bent Ear Solutions	Executive Director of Mission Delivery	sphillips@bent-ear.com



Name	Organization	Title	Email
Jeff Matthews	City of Stillwater Code Enforcement	Building and Fire Code Services Director	jeff.matthews@stillwaterok.gov
Jun Gao	City of Stillwater GIS	GIS Admin	jun.gao@stillwaterok.gov
David Barth	City of Stillwater Development Services	Director of Development Services	david.barth@stillwaterok.gov
Zack Henson	City of Stillwater	Watershed Quality Manager	zack.henson@stillwaterok.gov



Figure B-9 Stakeholder Workshop 2 Agenda



**City of Stillwater
2025 Hazard Mitigation Plan Update
Stakeholder Workshop #2 Sign-In Sheet
Tuesday, June 17, 2025, 1:00 p.m. to 4:00 p.m.**

1. Welcome
2. Previous Meetings Recap
3. GIS Presentation – Gena Barnwell
4. Stillwater Public Schools Capabilities
5. HMP Integration into Other Planning Mechanisms – Previous and Future
6. HMP Adoption and OEM/FEMA Review Process
7. Public Education and Outreach
8. 2025 Mitigation Action Items Discussion
9. Next Steps
10. Closing Remarks and Adjournment





Figure B-10 Stakeholder Workshop 2 Sign-In Sheets

MEETING SIGN-IN SHEET		2025 COS/SPS HAZARD MITIGATION PLAN	
Project:	COS/SPS - 2025 Hazards Mitigation Meeting		Meeting Date: Tuesday, June 17, 2025 1:00-4:00pm
Facilitator:	City of Stillwater Emergency Management/WSB		Place/Room: Stw Community Center – Rm 119

Initials	Name	Department	E-Mail
	Alane Zannotti	Chamber of Commerce	alane@stillwaterchamber.org
	Alexander Greenwich	Payne County Health Department	Alexander.greenwich@ok.health.gov
AW	Allison Whitsitt	WSB	Allison.whitsitt@wsbeng.com
	Anita Kaufman	Payne County Conservation District	payneccd@conservation.ok.gov
WEB	Archie Losey	WSB	Archie.losey@wsbeng.com
	Barbara Bliss	Parks/Community Resources	Barbara.bliss@stillwaterok.gov
BM	Bill Millis	Engineering	Bill.millis@stillwaterok.gov
BT	Billy Treadwell	Stillwater Medical Center	wtreadwell@stillwater-medical.org
	Bo Gamble	Stillwater Public Schools	bgamble@stillwaterschools.com
BS	Brad Stewart	Information Technology	Brad.stewart@stillwaterok.gov
BH	Brandon Halcomb	Stillwater Fire	Brandon.halcomb@stillwaterok.gov
	Brantley Nendrex	ODOT	bnendrex@odot.org
BP	Brenden Pope	COS-EM	Brenden.pope@stillwaterok.gov
	Candy Staring	Engineering	Candy.staring@stillwaterok.gov
	Chris Franks	Environmental	Chris.franks@stillwaterok.gov
CD	Christy Driskel	City Manager's Office	Christy.driskel@stillwaterok.gov
	Cody Manuel	Stillwater Police	Cody.manuel@stillwaterok.gov
CM	Cristy Morrison	Visit Stillwater	cristy@visitstillwater.org
	Dan Ray	OSU-EM	Dan.ray@okstate.edu



Initials	Name	Department	E-Mail
	Daniel Nack	Payne County Sheriff	dnack@sheriff.paynecountyok.gov
DB	David Barth	Development Services	David.barth@stillwaterok.gov
	David Casey	COS-EM	David.casey@stillwaterok.gov
DD	Dawn Dodson	Marketing	Dawn.dodson@stillwaterok.gov
	Dustan Portman	Stillwater Fire Department	Dustan.portman@stillwaterok.gov
JD	James Driskel	Water Utilities	James.driskel@stillwaterok.gov
JM	Jeff Matthews	Code Enforcement <i>Rd</i>	Jeff.matthews@stillwaterok.gov
JS	Jim Scott	Parks/Community Resources	Jim.scott@stillwaterok.gov
	Johnathon Harrold	ODOT	jharrold@odot.org
JG	Jun Gao	GIS	Jun.gao@stillwaterok.gov
KR	Kellie Reed	Stillwater Regional Airport	Kellie.reed@stillwaterok.gov
LR	Lisa Robinson	Oklahoma Department of EM	Lisa.robinson@oem.ok.gov
	Logan Anderson	ODOT	landerson@odot.org
	Loren Smith	Stillwater Electric Utility	Loren.smith@stillwaterok.gov
MW	Mark White	Public Works	Mark.white@stillwaterok.gov
MF	Matt Faulkner	Waste Management	Matt.faulkner@stillwaterok.gov
	Matt Mitchell	ODOT	mmitchell@odot.org
PT	Pierce Taylor	Payne County EM	Pierce.taylor@pcem.paynecountyok.gov
RC	Rachael Condley	Our Daily Bread	director@ourdailybreadstillwater.org
	Rachel Wasserman	Animal Welfare	Rachel.wasserman@stillwaterok.gov
RH	Rob Hill	COS-EM	Rob.hill@stillwaterok.gov
RA	Russell Andrews	Environmental	Russell.andrews@stillwaterok.gov



Initials	Name	Department	E-Mail
	Sara Thomas	COS-EM	Sara.thomas10@okstate.edu
	Seth Condley	Payne County Commissioner #2	scondley@paynecountyok.gov
	Thomas Tharp	Stillwater Fire Department	Thomas.tharp@stillwaterok.gov
	Wendi Lemons	WSB	Wendi.lemons@wsbeng.com
	Wes Bennett	Stillwater Electric Distribution	Wesley.bennett@stillwaterok.gov
ZH	Zack Henson	Watershed Quality Manager	Zack.henson@stillwaterok.gov

Guests

RLT	Ron Tarbutton	Citizen	rontarbutton@outlook.com
DME	David Engle	Stillwater resident	david.engle@okstate.edu
TE	Terry Essary		
PAM	Pam Moore	Stillwater Milling Co	pgille.stillwatermill.com
PWR	Paul Rogers	Stillwater Resident	progers@ez2.net
BAE	Bonnie Esten	" "	beaston2120@gmail.com
R.C.II	Roberto Chavez Ramos	Stillwater res.	roberto.chavezramos19@gmail.com
MRM	Michal Mileg	Stillwater res.	Michal.mileg81@gmail.com
DP	Dan'l DeKen	Citizen	de78te@yahoo.com



**City of Stillwater
2025 Hazard Mitigation Plan Update
Stakeholder Workshop #2 Sign-In Sheet
Tuesday, June 17, 2025, 1:00 p.m. to 4:00 p.m.**



Name	Title	Organization	Email
Archie Losey	Hazard Mitigation Planner	WSB	archie.losey@wsbeng.com
Gena Barnwell	GIS Analyst	WSB	gena.barnwell@wsbeng.com



Figure B-11 Core Group Meeting 2 Agenda



2025 City of Stillwater Hazard Mitigation Plan Update Core Group Meeting #2 Agenda

July 29, 2025 – 10:00am -11:30am
Microsoft Teams

1. Welcome
2. Public Engagement Discussion
 - a. Public Meeting Options
 - b. Promotional Materials
 - c. HMP Review Period
3. GIS Discussion – Gena Barnwell, WSB and Zach Stanford, Bent Ear Solutions
 - a. Status update on WSB/Bent Ear collaboration
4. HMP Progress Status Update
5. HMP Adoption and other Housekeeping
6. Closing and adjournment



Figure B-12 Core Group Meeting 2 Sign-In Sheet



City of Stillwater
2025 Hazard Mitigation Plan Update
Core Group Meeting #2 Sign-In Sheet
 Tuesday, July 29, 2025, 10:00 a.m. to 11:30 a.m.
 Microsoft Teams



Name	Organization	Title	Email
Wesley Bennett	City of Stillwater	Watershed Quality Manager	wesley.bennett@stillwaterok.gov
Loren Smith	City of Stillwater Electric Utility	Director of Electric Utility	loren.smith@stillwaterok.gov
Jeff Matthews	City of Stillwater Code Enforcement	Building and Fire Code Services Director	jeff.matthews@stillwaterok.gov
Rob Hill	City of Stillwater Emergency Management	Director of Emergency Management	rob.hill@stillwaterok.gov
Lisa Robinson	Oklahoma Department of Emergency Management	Northeast Regional Coordinator	lisa.robinson@oem.ok.gov
Zack Henson	City of Stillwater	Watershed Quality Manager	zack.henson@stillwaterok.gov
Gena Barnwell	WSB	GIS Analyst	gena.barnwell@wsbeng.com
Allison Whitsitt	WSB	Planning Department Manager	allison.whitsitt@wsbeng.com



Name	Organization	Title	Email
Sara Thomas	WSB	Hazard Mitigation Planner	sara.thomas@wsbeng.com
Zach Stanford	Bent Ear Solutions	Senior GIS Consultant	zstanford@bent-ear.com
Pierce Taylor	Payne County Emergency Management	Director	pierce.taylor@stillwaterok.gov
Bill Millis	City of Stillwater Engineering	Deputy Director	bill.millis@stillwaterok.gov
Alane Zannotti	Stillwater Chamber of Commerce	President & CEO	alane@stillwaterchamber.org
Jim Scott	City of Stillwater Parks/Community Resources	Parks and Facilities Manager	jim.scott@stillwaterok.gov
Brenden Pope	City of Stillwater Emergency Management	Deputy Director of Emergency Management	brenden.pope@stillwaterok.gov
Kellie Reed	Stillwater Regional Airport	Airport Director	kellie.reed@stillwaterok.gov
Matt Faulkner	City of Stillwater Waste Management	Director	matt.faulkner@stillwaterok.gov
Brad Stewart	City of Stillwater Information Technology	Director of Information Technology	brad.stewart@stillwaterok.gov
James Driskel	City of Stillwater Water Utilities	Water Utilities Director	james.driskel@stillwaterok.gov



Name	Organization	Title	Email
Christy Driskel	City of Stillwater City Manager's Office	Deputy City Manager	christy.driskel@stillwaterok.gov
Jun Gao	City of Stillwater GIS	GIS Admin	jun.gao@stillwaterok.gov
Archie Losey	WSB	Hazard Mitigation Planner	archie.losey@wsbeng.com
Dawn Dodson	City of Stillwater Marketing	Director of Communications	dawn.dodson@stillwaterok.gov



Figure B-13 Stakeholder Participation Table

2025 City of Stillwater Hazard Mitigation Plan Update

STAKEHOLDER PARTICIPATION

Name	Organization	Title	Email	K	S1	P/T	S2	C2
Rob Hill	City of Stillwater Emergency Management	Director of Emergency Management	rob.hill@stillwaterok.gov					
Brenden Pope	City of Stillwater Emergency Management	Deputy Director of Emergency Management	brenden.pope@stillwaterok.gov					
Sara Thomas	City of Stillwater Emergency Management	Emergency Management Intern	sara.thomas10@okstate.edu					
	WSB	Hazard Mitigation Planner	sara.thomas@wsbeng.com					
Allison Whitsitt	WSB	Planning Department Manager	allison.whitsitt@wsbeng.com					
Alane Zannotti	Stillwater Chamber of Commerce	President & CEO	alane@stillwaterchamber.org					
Barbara Bliss	City of Stillwater Parks/Community Resources	Director of Community Resources	barbara.bliss@stillwaterok.gov					
Bill Millis	City of Stillwater Engineering	Deputy Director	bill.millis@stillwaterok.gov					
Bo Gamble	Stillwater Public Schools	Assistant Superintendent of Operations	bgamble@stillwaterschools.com					
Brad Stewart	City of Stillwater Information Technology	Director of Information Technology	brad.stewart@stillwaterok.gov					



Name	Organization	Title	Email	K	S1	P/T	S2	C2
Brandon Halcomb	Stillwater Fire Department	Assistant Fire Chief	brandon.halcomb@stillwaterok.gov					
Candy Staring	City of Stillwater Engineering	Director of Engineering	candy.staring@stillwaterok.gov					
Christy Driskel	City of Stillwater City Manager's Office	Deputy City Manager	christy.driskel@stillwaterok.gov					
Cody Manuel	Stillwater Police Department	1 st Watch Patrol Lieutenant	cody.manuel@stillwaterok.gov					
Dan Ray	Oklahoma State University Police Department	Captain	dan.ray@okstate.edu					
David Barth	City of Stillwater Development Services	Director of Development Services	david.barth@stillwaterok.gov					
David Casey	City of Stillwater Emergency Management	Technician	david.casey@stillwaterok.gov					
Dawn Dodson	City of Stillwater Marketing	Director of Communications	dawn.dodson@stillwaterok.gov					
James Driskel	City of Stillwater Water Utilities	Water Utilities Director	james.driskel@stillwaterok.gov					
Jeff Matthews	City of Stillwater Code Enforcement	Building and Fire Code Services Director	jeff.matthews@stillwaterok.gov					
Jim Scott	City of Stillwater Parks/Community Resources	Parks and Facilities Manager	jim.scott@stillwaterok.gov					
Kellie Reed	Stillwater Regional Airport	Airport Director	kellie.reed@stillwaterok.gov					



Name	Organization	Title	Email	K	S1	P/T	S2	C2
Logan Anderson	Oklahoma Department of Transportation	Resident Engineer	landerson@odot.org					
Loren Smith	City of Stillwater Electric Utility	Director of Electric Utility	loren.smith@stillwaterok.gov					
Mark White	City of Stillwater Public Works	Director of Public Works	mark.white@stillwaterok.gov					
Matt Faulkner	City of Stillwater Waste Management	Director	matt.faulkner@stillwaterok.gov					
Pierce Taylor	Payne County Emergency Management	Director	pierce.taylor@stillwaterok.gov					
Rachael Condley	Our Daily Bread	Executive Director	director@ourdailybreadstillwater.org					
Rachel Wasserman	City of Stillwater Animal Welfare	Supervisor	rachel.wasserman@stillwaterok.gov					
Terry Essary	Stillwater Fire Department	Fire Chief	terry.essary@stillwaterok.gov					
Zack Henson	City of Stillwater	Watershed Quality Manager	zack.henson@stillwaterok.gov					
Archie Losey	WSB	Hazard Mitigation Planner	archie.losey@wsbeng.com					
Wendi Lemons	WSB	Senior Grants Project Manager	wendi.lemons@wsbeng.com					
Gena Barnwell	WSB	GIS Analyst	gena.barnwell@wsbeng.com					
Alexander Greenwich	Oklahoma State Department of Health	Local Emergency Response Plans Specialist	alexander.greenwich@ok.health.gov					



Name	Organization	Title	Email	K	S1	P/T	S2	C2
Anita Kaufman	Payne County Conservation District	District Manager	payneccd@conservation.ok.gov					
Billy Treadwell	Stillwater Medical Center Safety and Security	Director	wtreadwell@stillwater-medical.org					
Chris Franks	City of Stillwater Environmental	Manager	chris.franks@stillwaterok.gov					
Cristy Morrison	Visit Stillwater	President/CEO	cristy@visitstillwater.org					
Daniel Nack	Payne County Sheriff's Office	Sheriff's Deputy	dnack@sheriff.paynecountyok.gov					
Jun Gao	City of Stillwater GIS	GIS Admin	jun.gao@stillwaterok.gov					
Lisa Robinson	Oklahoma Department of Emergency Management	Northeast Regional Coordinator	lisa.robinson@oem.ok.gov					
Seth Condley	Payne County Board of County Commissioners	County Commissioner, District #2	scondley@paynecountyok.gov					
Wes Bennett	City of Stillwater	Watershed Quality Manager	wesley.bennett@stillwaterok.gov					
Thomas Tharp	City of Stillwater Fire Department	Fire Marshal	thomas.tharp@stillwaterok.gov					
Jonathan Harrold	Oklahoma Department of Transportation, Payne County Maintenance #60	Superintendent	jharrold@odot.org					
Brantley Hendrex	Oklahoma Department of Transportation, Field District 4	Assistant District Engineer, Maintenance, Rural	bhendrex@odot.org					



Name	Organization	Title	Email	K	S1	P/T	S2	C2
Dustan Portman	City of Stillwater Fire Department	Deputy Fire Marshal	dustan.portman@stillwaterok.gov					
Matt Mitchell	Oklahoma Department of Transportation, Field District 4	District Engineer	mmitchell@odot.org					
Kevin Clark	City of Stillwater City Council	City Councilor	councilorclark@stillwaterok.gov					
Greg Brunelle	Bent Ear Solutions	Director – Business Partnerships	gbrunelle@bent-ear.com					
Samantha Phillips	Bent Ear Solutions	Executive Director of Mission Delivery	sphillips@bent-ear.com					
Pam Moore	Stillwater Milling Co.	CEO	pgill@stillwatermill.com					
Zach Stanford	Bent Ear Solutions	Senior GIS Consultant	zstanford@bent-ear.com					

MEETINGS

K = Kickoff Meeting S1 = Stakeholder Workshop/Core Group Meeting #1 P/T = Planning and Technology Core Group Meeting

S2 = Stakeholder Workshop #2

C2 = Core Group Meeting #2



= Attendance at Meeting



Figure B-14 City of Stillwater Promotional Facebook Post #1



PUBLIC INPUT REQUESTED








Your input is needed as the City of Stillwater is updating your Hazard Mitigation Plan (HMP)! Over the next few months, the HMP will be re-assessing risks posed by natural hazards on the people and infrastructure throughout the City, and as residents, your feedback is requested on behalf of City of Stillwater Emergency Management. The goal of the 2025 HMP Update is to identify mitigation strategies that will help protect your community from future disasters. YOUR participation is the foundation to this Plan.

You can help by scanning the QR code below, or by entering this URL into your browser: <https://arcg.is/8SKS1>

Our first meeting will take place on April 3, 2025, at 1:30pm in the Stillwater Community Center, #121. Please consider joining your community's leaders as we forge ahead and make Stillwater more resilient. We look forward to seeing you!






City of Stillwater Emergency Management SEMA
March 25 · 🌐

Your input is needed! The **City of Stillwater - Government** is updating the Hazard Mitigation Plan. Throughout the next few months, we will reassess risks posed by natural hazards to identify additional mitigation strategies, in effort to best protect our community. ***Please scan the QR code or go to: <https://arcg.is/8SKS1>

13 🗨️ 23 👍

Most relevant ▾

Angie Byte
I still have not seen this issue addressed or resolved: the Stillwater phone emergency alert system didn't notify people to evacuate. Neither did the national weather service phone / text system alert anyone I know or in my area about the fires, or th... See more

Figure B-15 City of Stillwater Promotional Facebook Post #2



PUBLIC INPUT REQUESTED








Your input is needed as the City of Stillwater is updating your Hazard Mitigation Plan (HMP)! Over the next few months, the HMP will be re-assessing risks posed by natural hazards on the people and infrastructure throughout the City, and as residents, your feedback is requested on behalf of City of Stillwater Emergency Management. The goal of the 2025 HMP Update is to identify mitigation strategies that will help protect your community from future disasters. YOUR participation is the foundation to this Plan.

You can help by scanning the QR code below, or by entering this URL into your browser: <https://arcg.is/8SKS1>

Our next meeting will take place Tuesday, June 17, 2025, at 1:00 p.m. at the Stillwater Community Center, 315 West 8th Street, Room 1. Please consider joining your community leaders as we forge ahead and make Stillwater more resilient. We look forward to seeing you!






City of Stillwater Emergency Management SEMA
June 12 · 🌐

PUBLIC INPUT REQUESTED: 2025 City of Stillwater Hazard Mitigation Plan
📅 Date: Tuesday, June 17, 2025
🕒 Time: 1 p.m.
📍 Place: Stillwater Community Center, 315 W 8th Street, Room 121
Please join the conversation and let's discuss ways to make Stillwater more resilient. We look forward to seeing you!

4 🗨️ 12 👍

Most relevant ▾

Tim Hardin
Ron Tarbutton D Scott Petty
7w Like Reply Edited
View 1 reply

Reanay Black
I can't make the URL big enough to tap on. What can I do to enter it?



Appendix C Demographic Information

Every resident in the City of Stillwater may experience exposure to at least one of the hazards identified in this plan. Understanding which groups of people may experience a greater degree of effects as a result of disasters is important when preparing for future events. Social and economic characteristics may limit an individual's ability to understand their risk and respond accordingly, as well as their ability to recover from disasters.

Table C-1 outlines some of the figures for each vulnerable group in the City.

Table C-1 City of Stillwater Demographic Vulnerability Indicators¹

Indicator	Stillwater
Population	48,394
Ages < 5 Years Old (%)	4.0
Ages > 65 Years Old (%)	10.4
Primary Language not English (%) ²	11.3
No High School Diploma (%)	4.4
One or More Disability (%)	11.5
Poverty Rate (%)	29.4

¹ U.S. Census data <https://data.census.gov/all?q=Stillwater+city,+Oklahoma>

² This metric is measured in terms of households, not overall population



Figure C-1 Percentage of Population Below Poverty Level (U.S. Census Bureau)

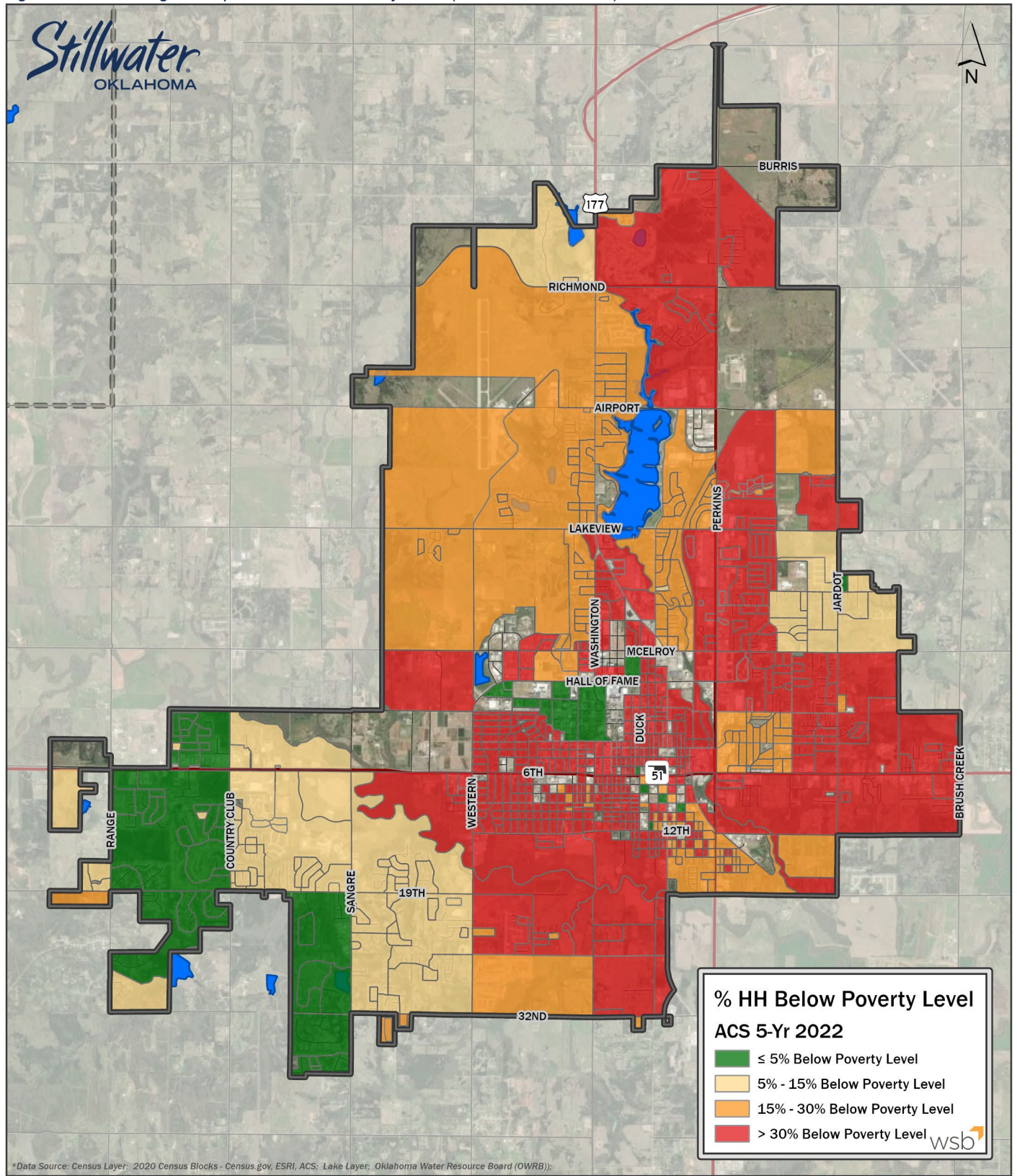




Figure C-2 Percentage of Population with One or More Reported Disability (U.S. Census Bureau)

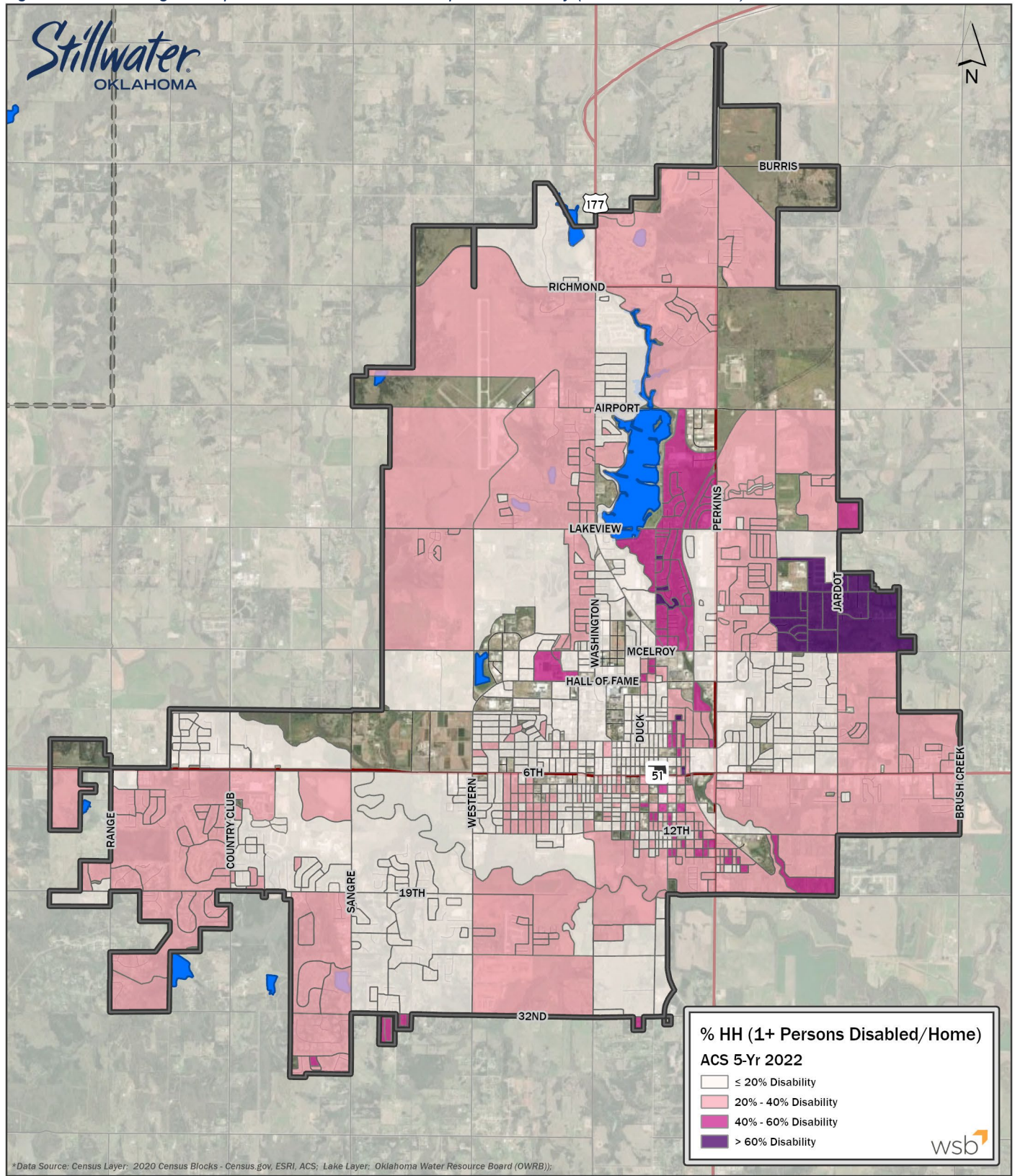




Figure C-3 Percentage of Population Under the Age of 5 Years (U.S. Census Bureau)

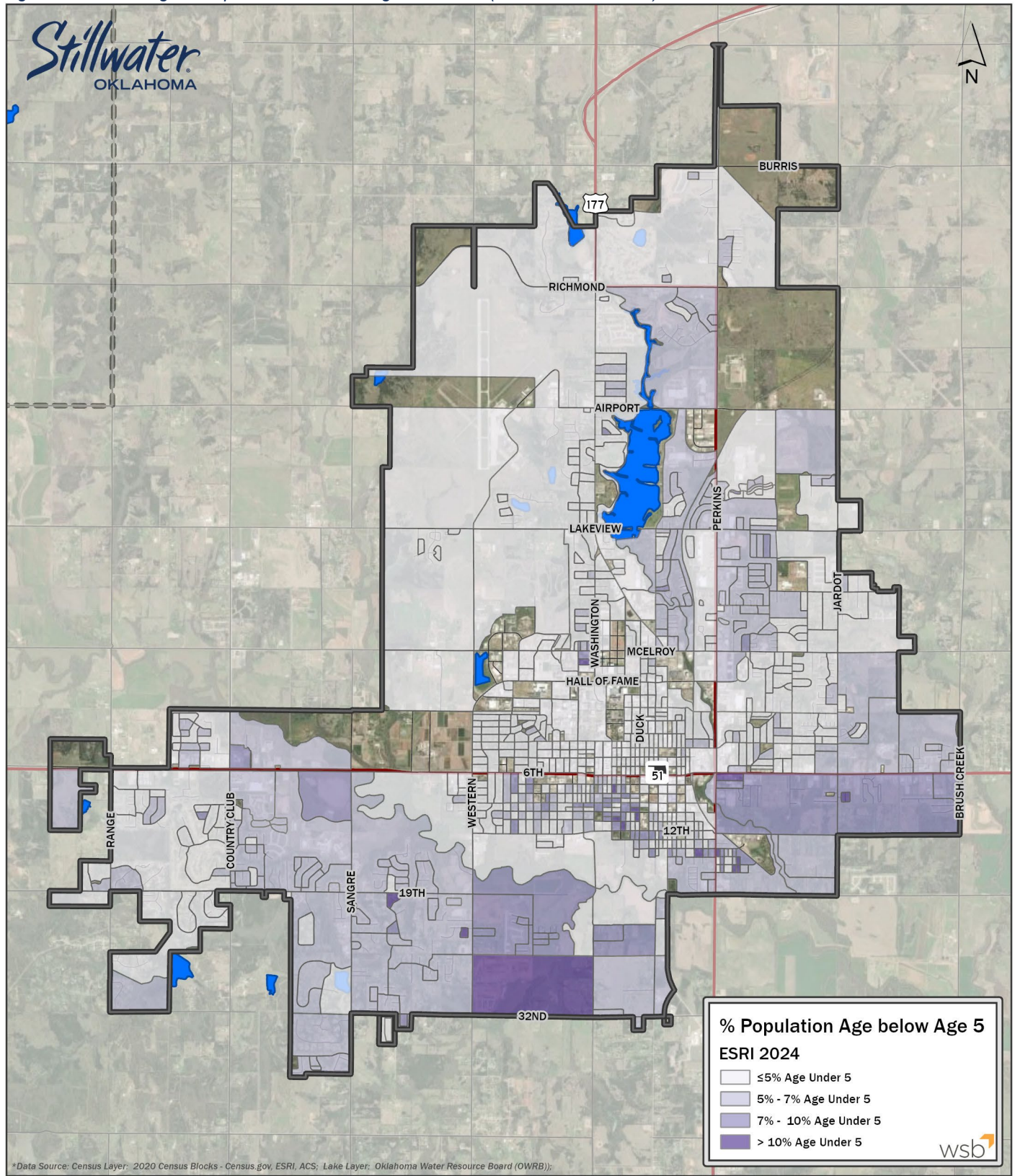




Figure C-4 Percentage of Population Over the Age of 65 Years (U.S. Census Bureau)

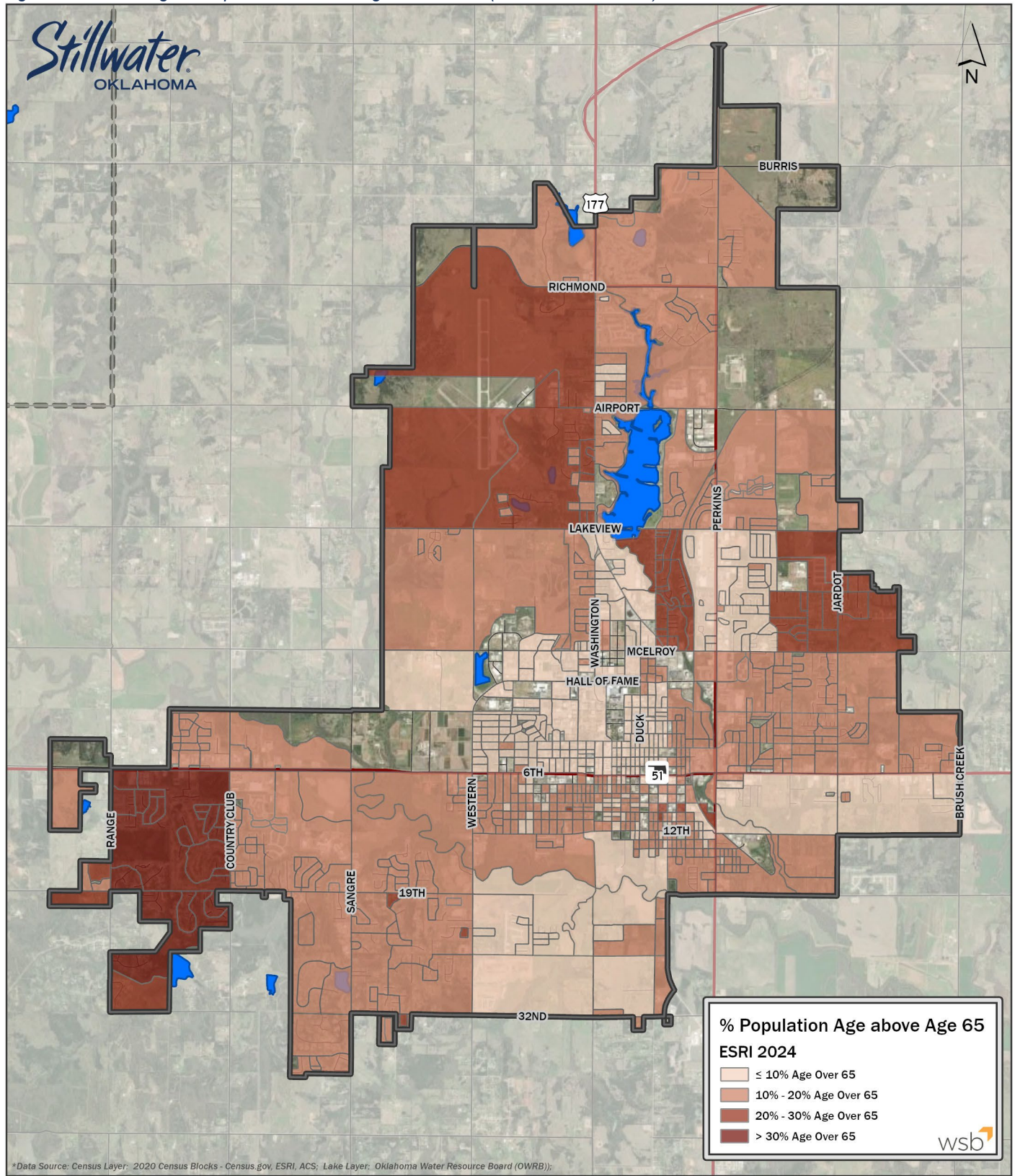




Figure C-5 Percentage of Population With Less Than High School Equivalent Education (U.S. Census Bureau)

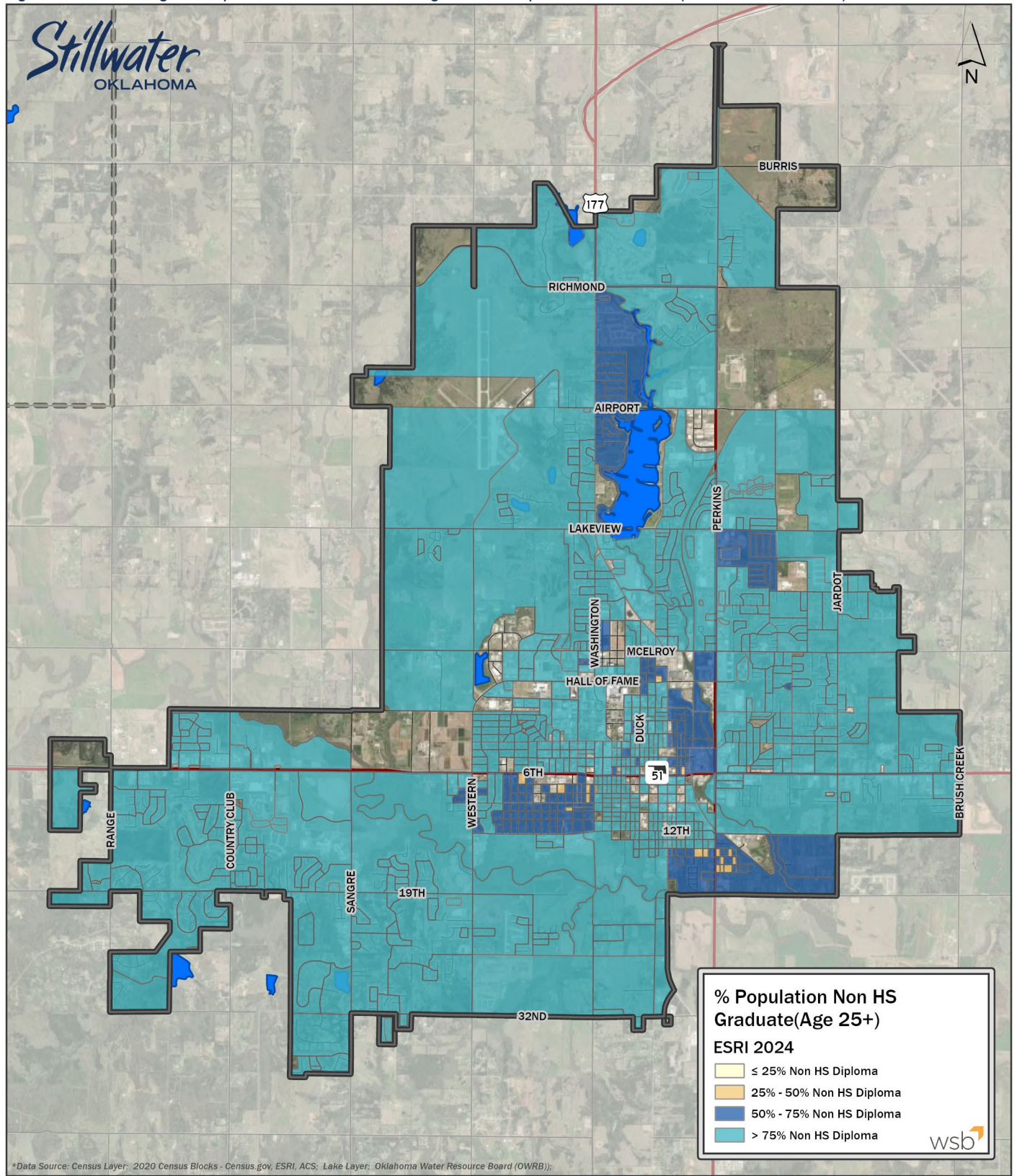
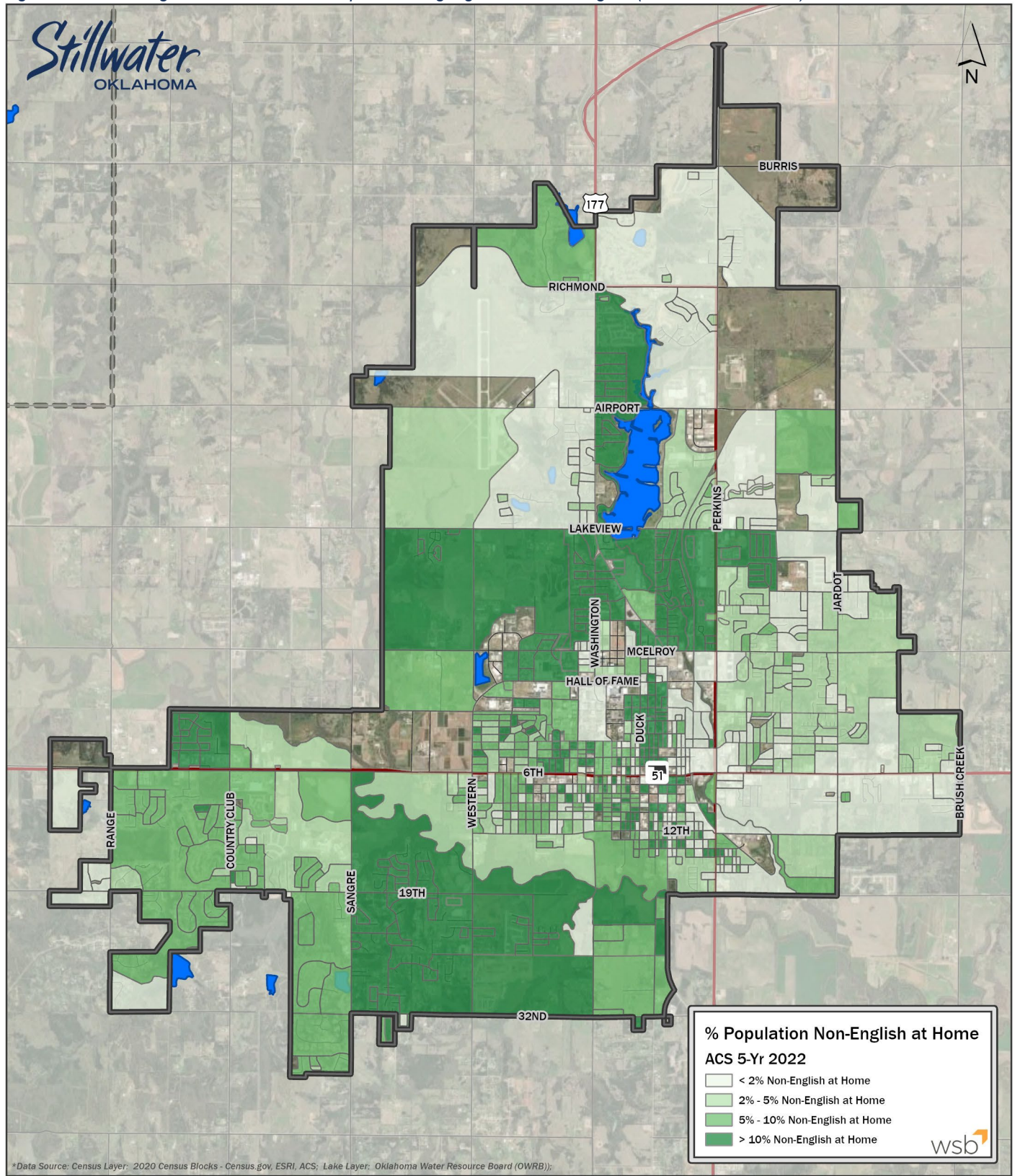




Figure C-6 Percentage of Households That Speak a Language Other than English (U.S. Census Bureau)





Appendix D Dam Inundation Maps

Element B1-c. Does the plan describe the extent for each identified hazard?

As discussed in the hazard profile for Dam Incident in Chapter 3, 15 dams hold the potential to inundate portions of the City of Stillwater. Inundation information is available for all dams, while only six also have a table of arrival times for the failure wave.

Compiled in this appendix are the series of figures and tables describing inundation attributes for each dam that have been made available.



D.1. Cedar Isle Dam

Tables detailing the depth and arrival times of the failure wave for Cedar Isle Dam were not made available during the development of this plan update. In the dam's EAP, it is stated that breach analysis data for this dam is located in Phase 1 Inspection Report of National Dam Safety Program prepared by the Oklahoma Water Resources Board. As a result, and since this report was not made available during the development of this plan, this has been identified as a data deficiency, and a subsequent mitigation action item (Action Item 30) has been created in order to remedy it.

On an ArcGIS StoryMap maintained by the City¹, a brief overview of the inundation effects as a result of this dam's failure are summarized. In this summary, it is stated that 25 or fewer homes are located downstream of this dam, with approximately 100 residents living in these homes who would potentially be at risk if the dam failed.

Three figures on the following pages provide details on the nature of risks that would result in the event of an incident at Cedar Isle Dam. First, Figure D-1 provides a black and white depiction of areas downstream from the structure that would be inundated as a result of a breach. Figure D-2 provides a hand-drawn analysis of inundation areas as a result of breach, as well as evacuation routes and ground surface elevations. Figure D-3 is a black and white satellite image detailing the reservoir, along with the homes, businesses, and highways in its vicinity.

¹ <https://storymaps.arcgis.com/stories/26495981ca8b4cafb1c9cf574bd7d425>



Figure D-1 Spatial Analysis for Cedar Isle Dam

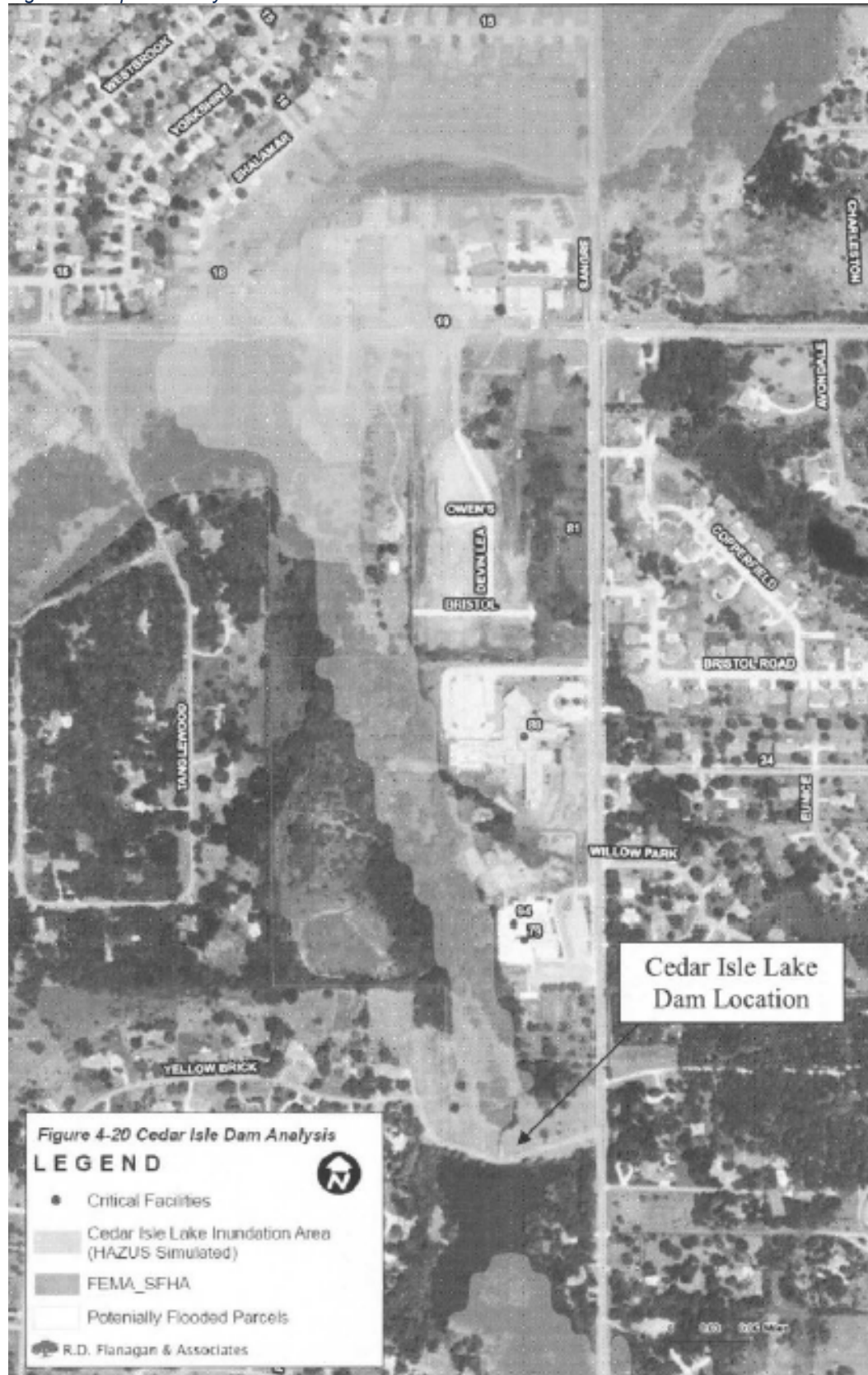




Figure D-2 Cedar Isle Dam Evacuation Map

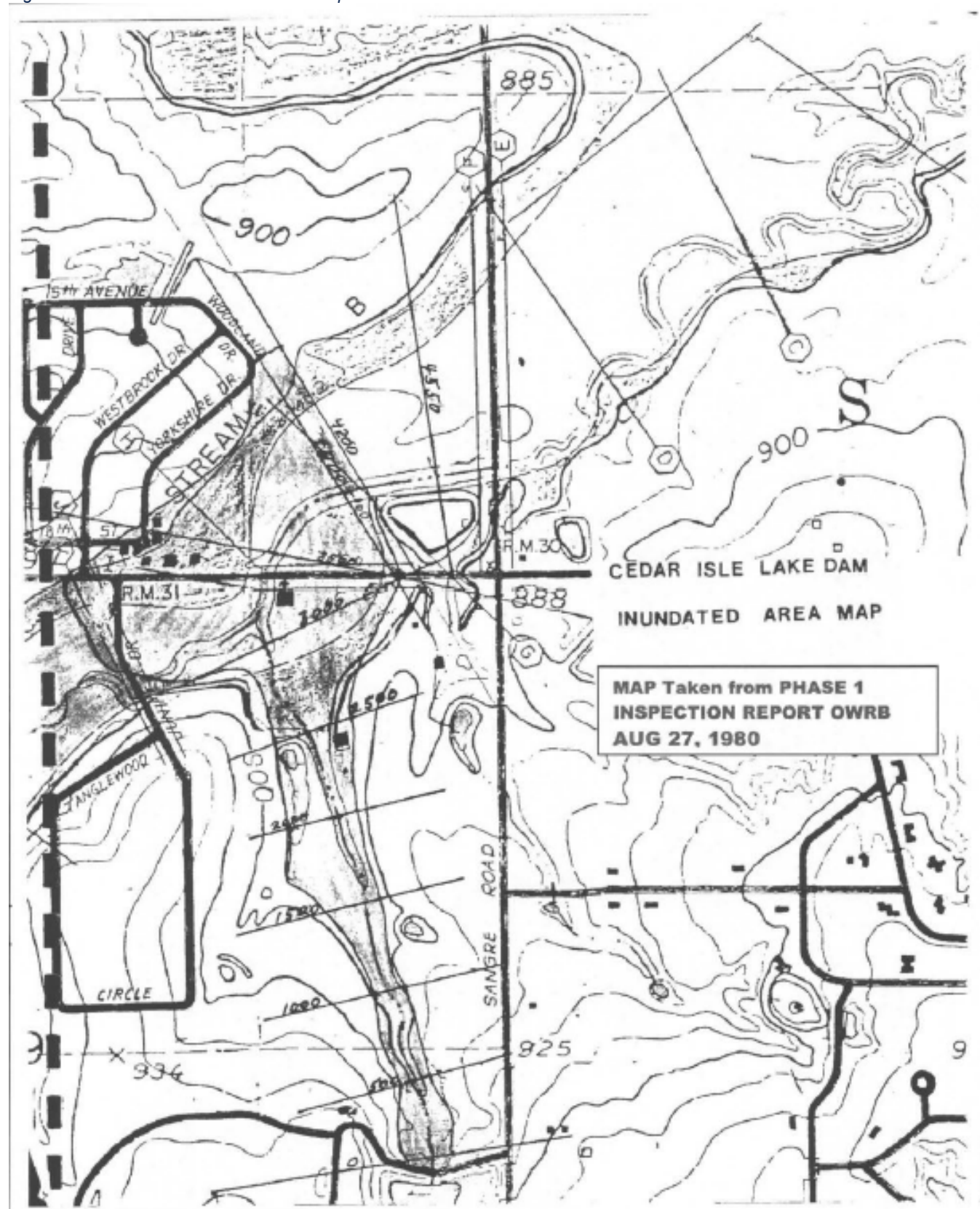




Figure D-3 Spatial Analysis of Residents, Businesses, and Highways at Risk of an Incident at Cedar Isle Dam



Lake Carl Blackwell Dam Breach

Inundation Area (OWRB Preliminary)

Stillwater Critical Facilities

- Fire Department
- Police Department
- Hospital
- Airport
- City Resource
- County Resource
- Water Supply
- Water Treatment
- Public Utility
- OSU Resource

The map displays the inundation area (OWRB Preliminary) in light blue, covering a large portion of the region. Key roads shown include CHISHOLM RD, W MCMURTRY RD, W RICHMOND RD, N COUNTRY CLUB RD, N SANGRE RD, W LAKEVIEW RD, W MCELROY RD, W HALL OF FAME AVE, W 12TH AVE, W 19TH AVE, W 32ND AVE, S COUNTRY CLUB RD, S SANGRE RD, S WESTERN RD, S WASHINGTON ST, S REDLANDS RD, N REDLANDS RD, N COTTONWOOD RD, S COTTONWOOD RD, S RANGE RD, S DUCK ST, S BRUSH CREEK RD, E 12TH AVE, E 19TH AVE, and E 32ND AVE. Water bodies include LAKE CARL BLACKWELL, NORTH STILLWATER CREEK, DRY CREEK, STILLWATER CREEK, COW CREEK, WEST BOOMER CREEK, DUCK CREEK, BOOMER CREEK, HARRINGTON CREEK, and STREAM C. The Stillwater City Limits are indicated by a black line. A scale bar shows 0, 0.75, and 1.5 miles. A north arrow is located in the bottom left corner.



D.3. Boomer Lake (NRCS Site 23) Dam

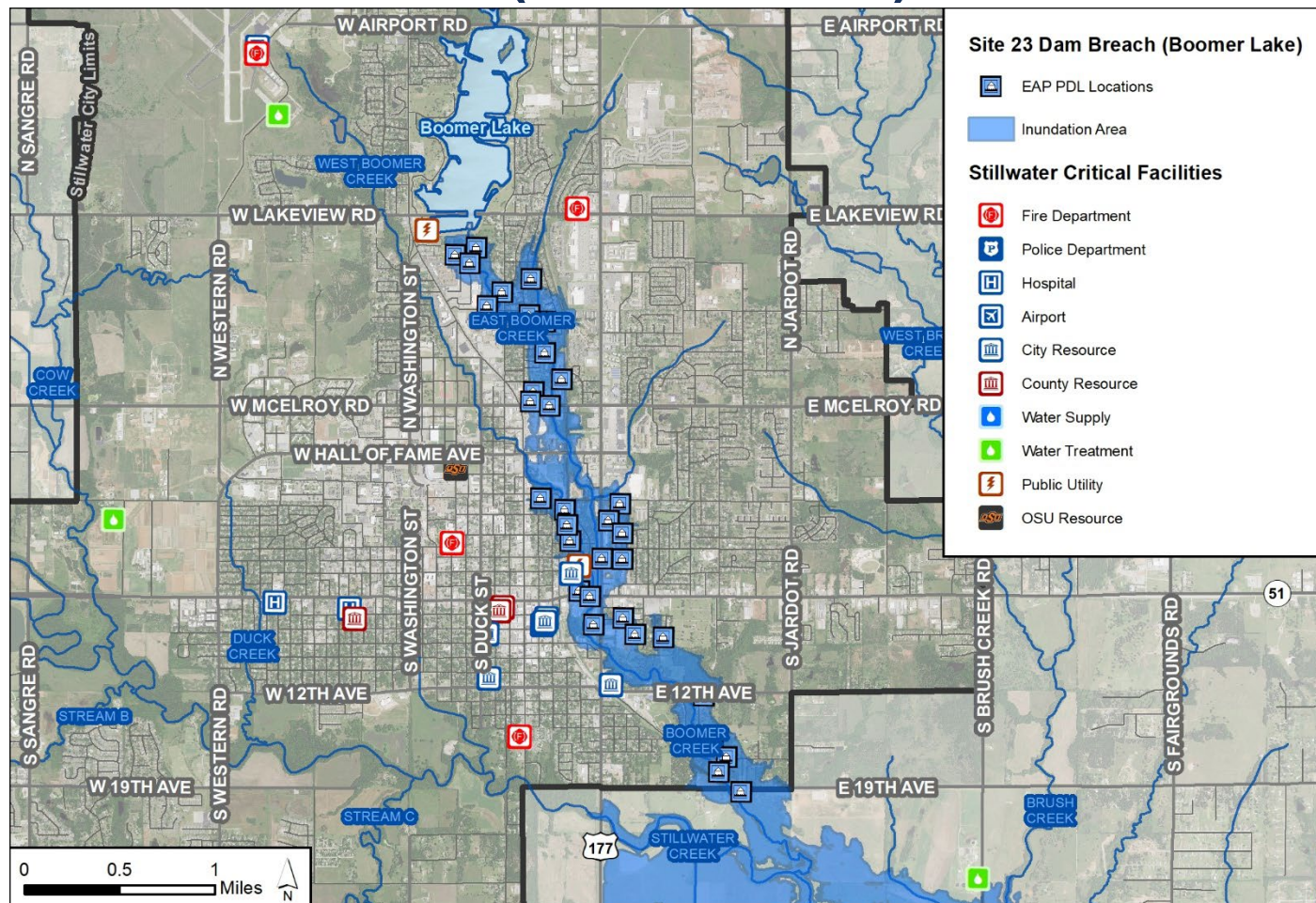


Table D-1 Boomer Lake (NRCS Site 23) Dam Failure Wave Arrival Table

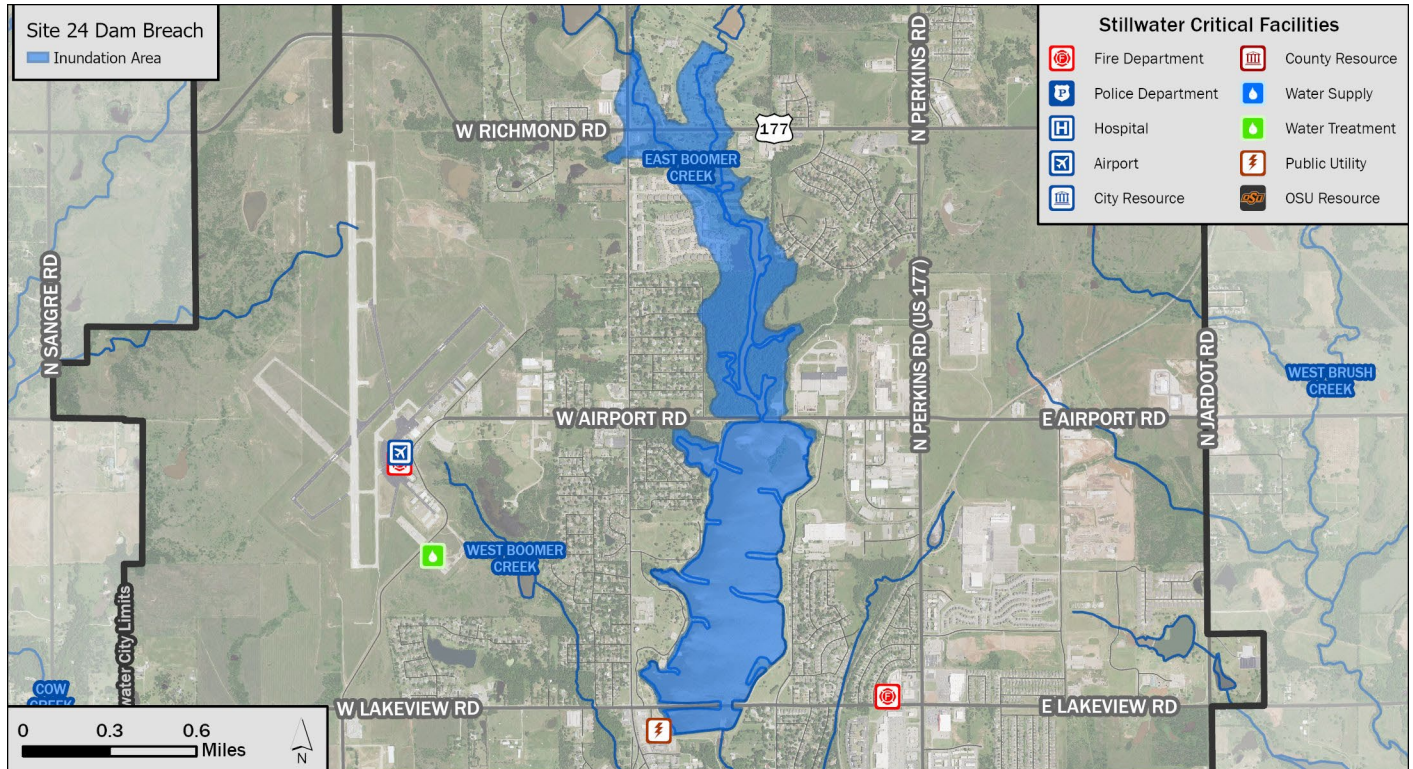
PDL_ID	Point Type	Structures	Water Depth (feet above ground level)	Time to Peak Flow (HH:MM)
STW1150	House	1	5.3	< 00:15
STW1151	House	1	1.2	< 00:15
STW115	Commercial	4	4.1	< 00:15
STW1153	House	4	3.0	00:25
STW1154	Commercial	1	0.5	00:27
STW1155	House	47	4.5	00:28
STW1156	Apartments	17	3.8	00:36
STW1157	House	31	4.3	00:37



PDL_ID	Point Type	Structures	Water Depth (feet above ground level)	Time to Peak Flow (HH:MM)
STW1158	House	27	4.6	00:40
STW1159	Apartment	9	2.1	00:42
STW1160	Mobile Home	25	3.3	00:42
STW1161	Commercial	6	2.6	00:42
STW1162	Bridge	1	6.6	00:42
STW1163	House	29	2.7	01:11
STW1164	House	3	2.4	01:15
STW1165	Apartment	3	2.3	01:16
STW1166	Commercial	6	1.4	01:20
STW1167	Roadbed/Tracks	1	0.2	01:21
STW1168	House	28	3.0	01:24
STW1169	House	52	3.4	01:25
STW1170	Commercial	7	1.6	01:27
STW1171	Bridge	1	2.9	01:27
STW1172	Commercial	11	2.7	01:30
STW1173	Bridge	1	3.1	01:32
STW1174	Commercial	1	0.6	01:41
STW1175	Commercial	12	2.0	01:42
STW1176	Apartment	3	1.1	01:46
STW1177	House	14	1.2	01:50
STW1178	House	2	5.2	02:03
STW1179	House	3	3.1	02:12
STW1180	House	3	3.0	02:21
STW1181	House	3	1.0	02:23
STW0080	Commercial	1	3.2	02:36

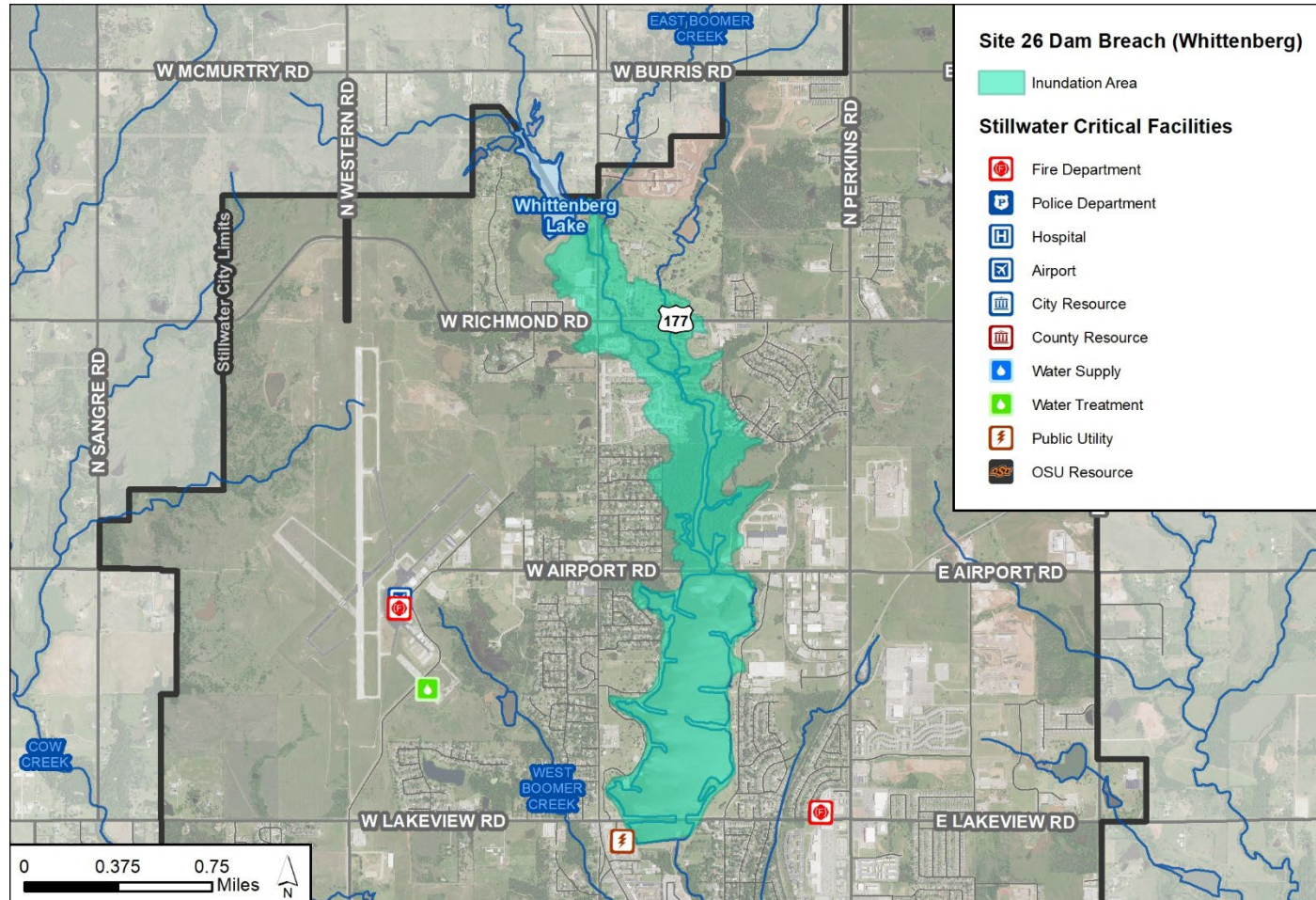


D.4. Lakeside Golf Course (NRCS Site 24) Dam



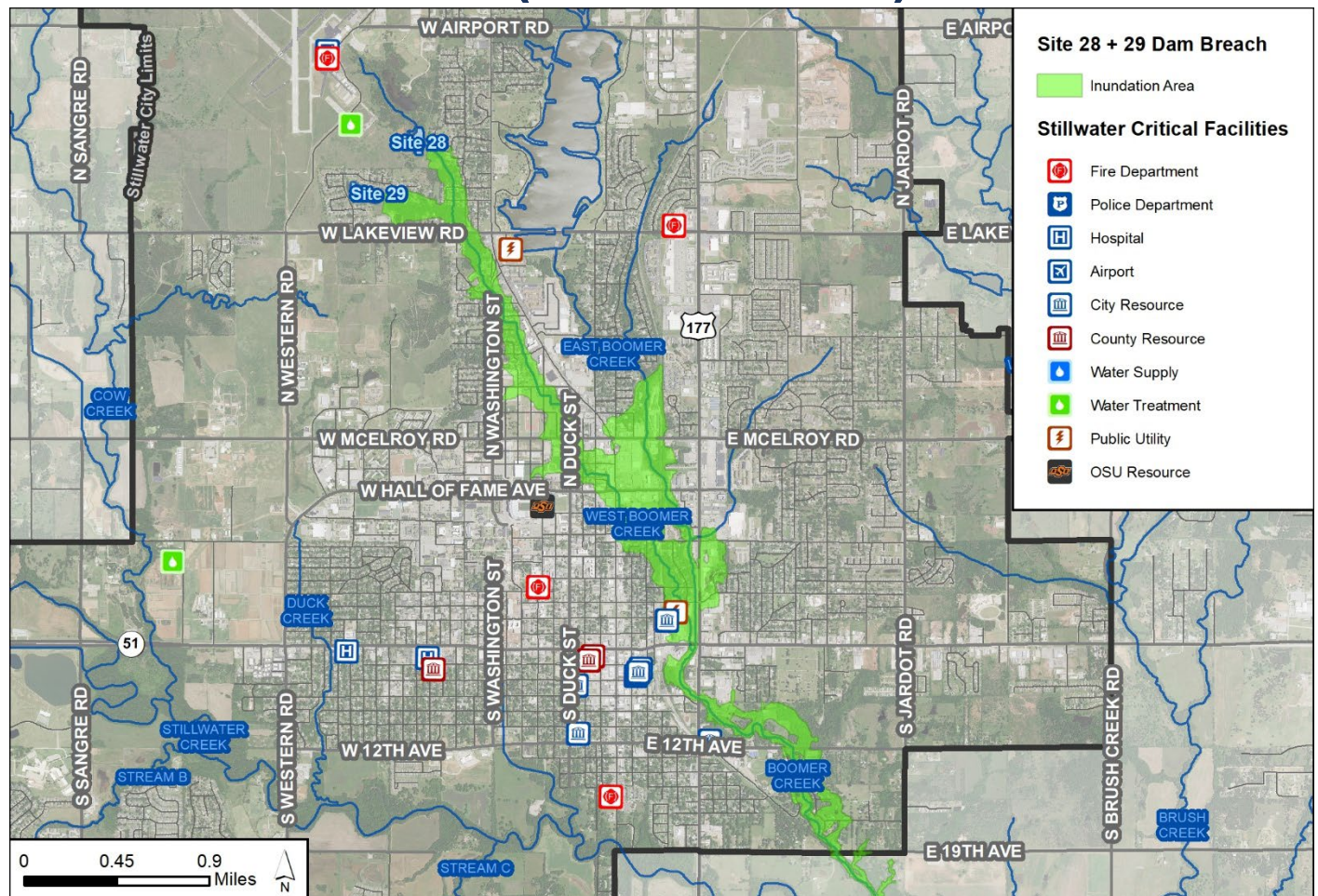


D.5. Whittenberg Lake (NRCS Site 26) Dam



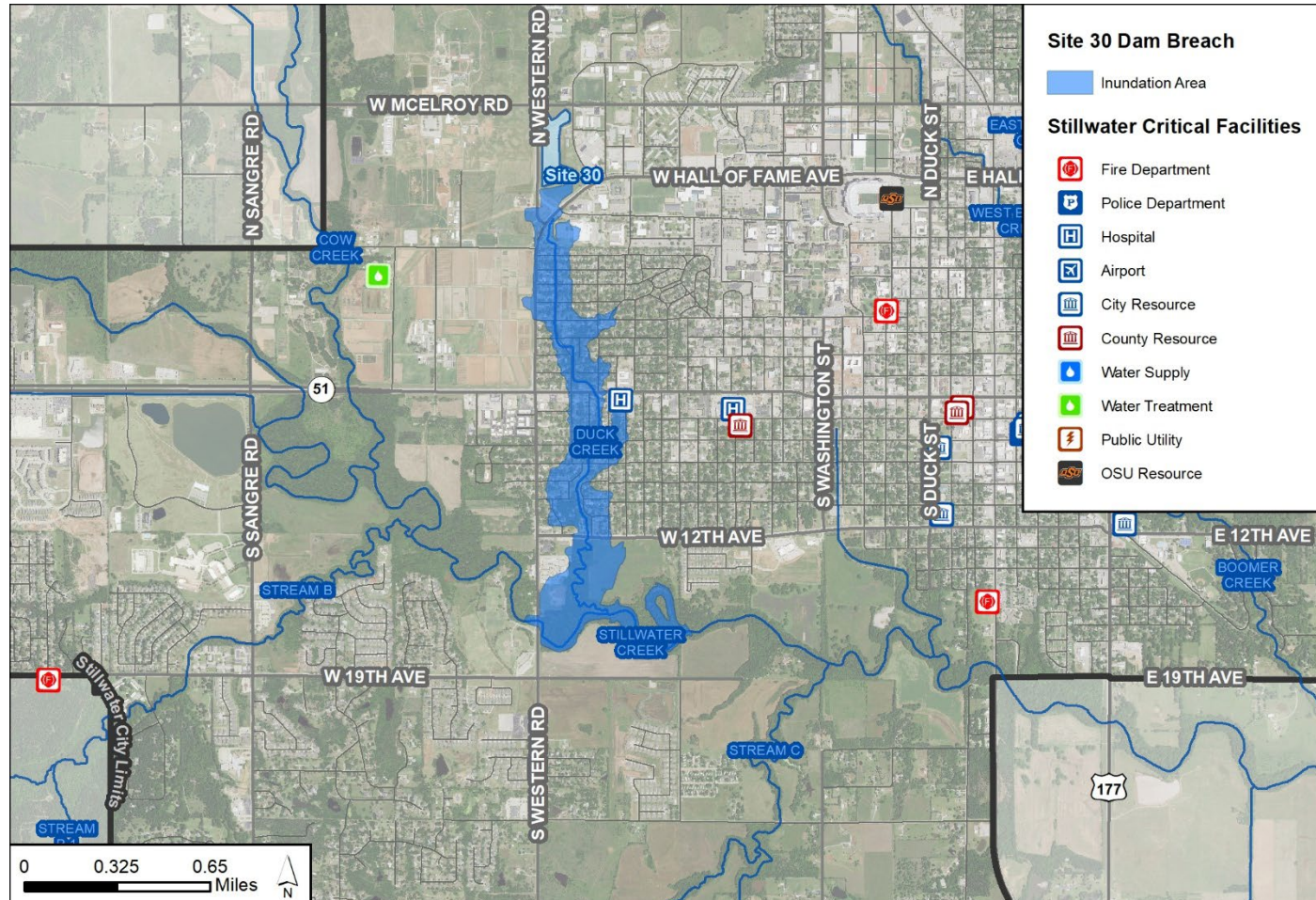


D.6. Hazen Lake (NRCS Site 28) and SCS-Stillwater Creek (NRCS Site 29) Dams



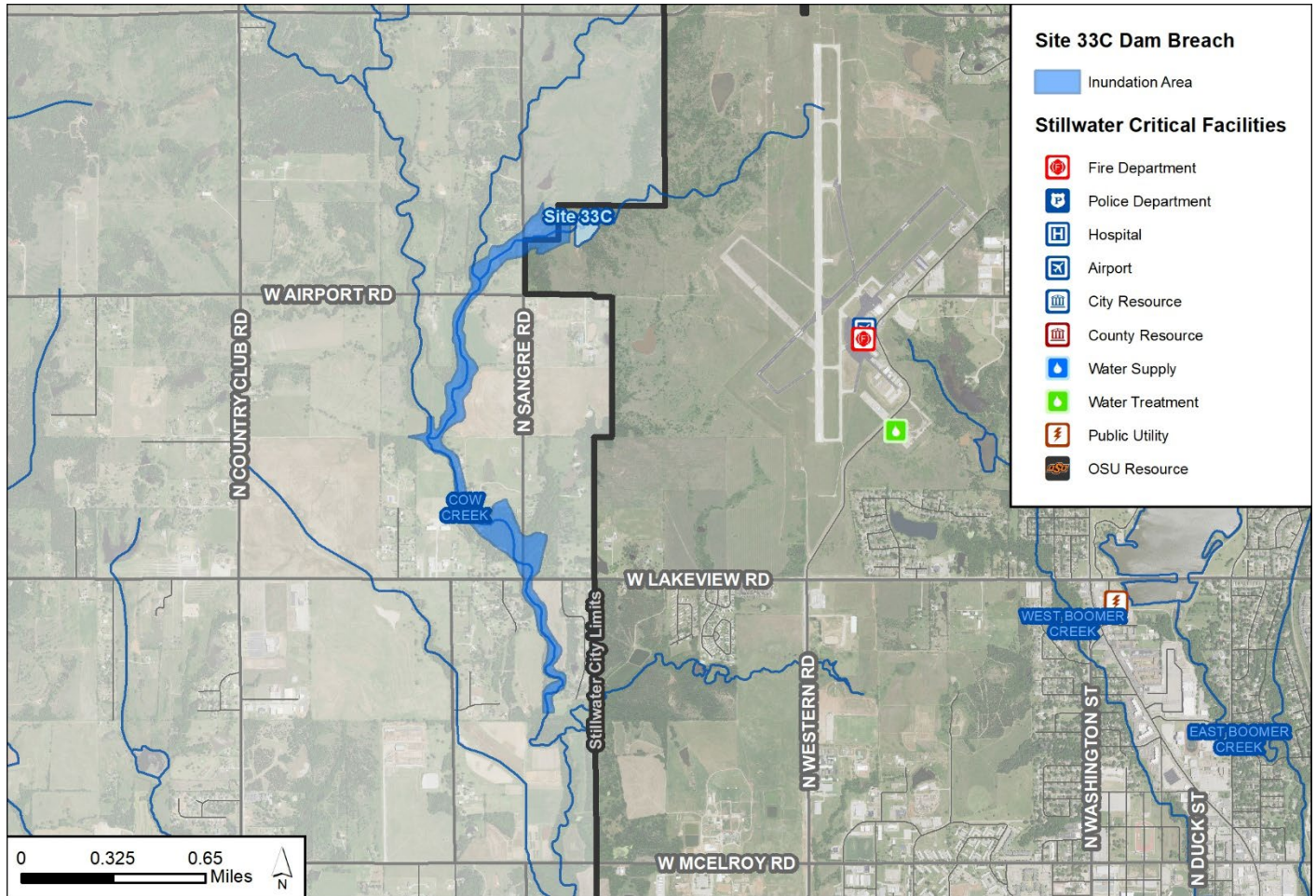


D.7. SCS-Stillwater Creek (NRCS Site 30) Dam





D.8. SCS-Stillwater Creek (NRCS Site 33C) Dam





D.9. SCS-Stillwater Creek (NRCS Site 39) Dam

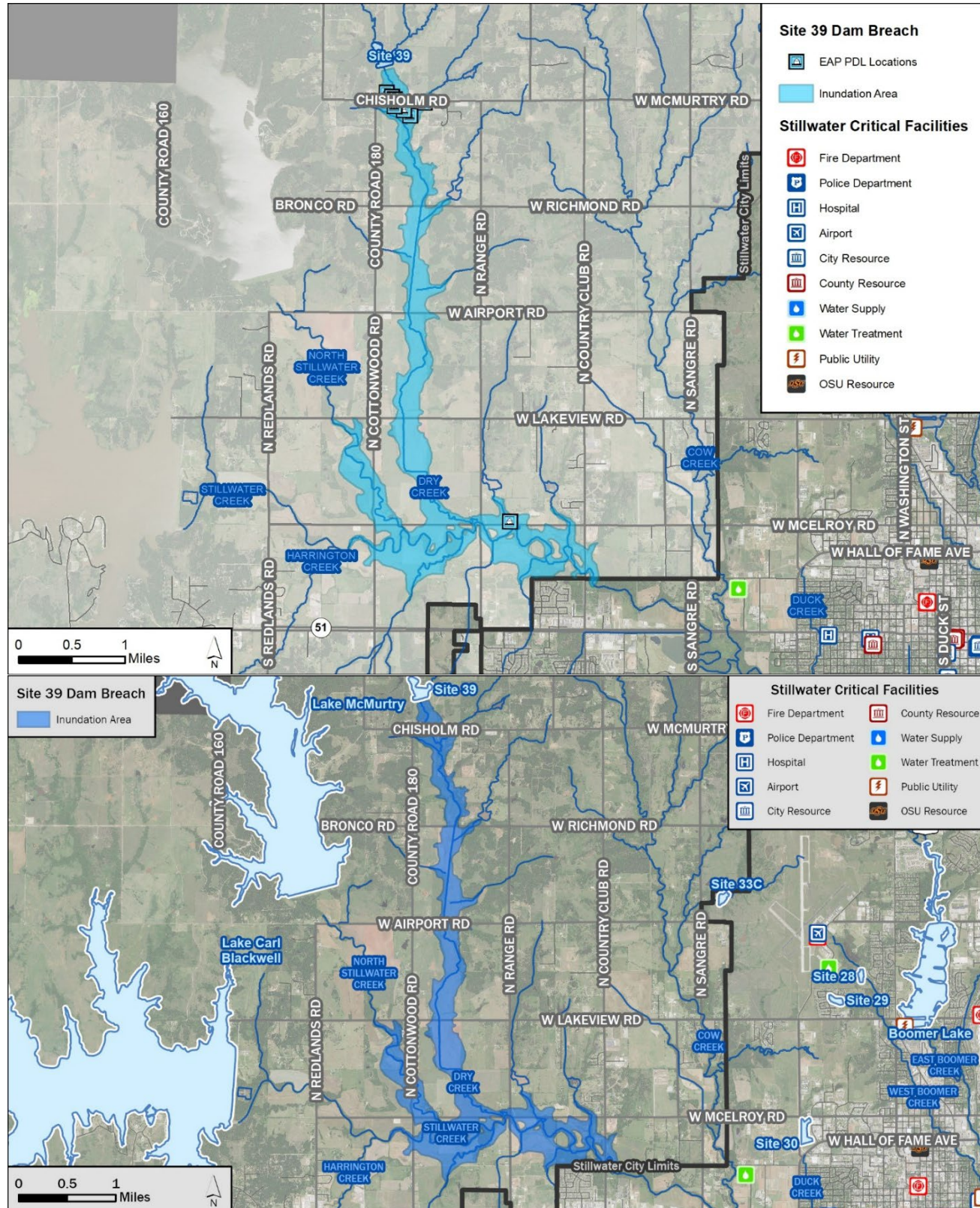


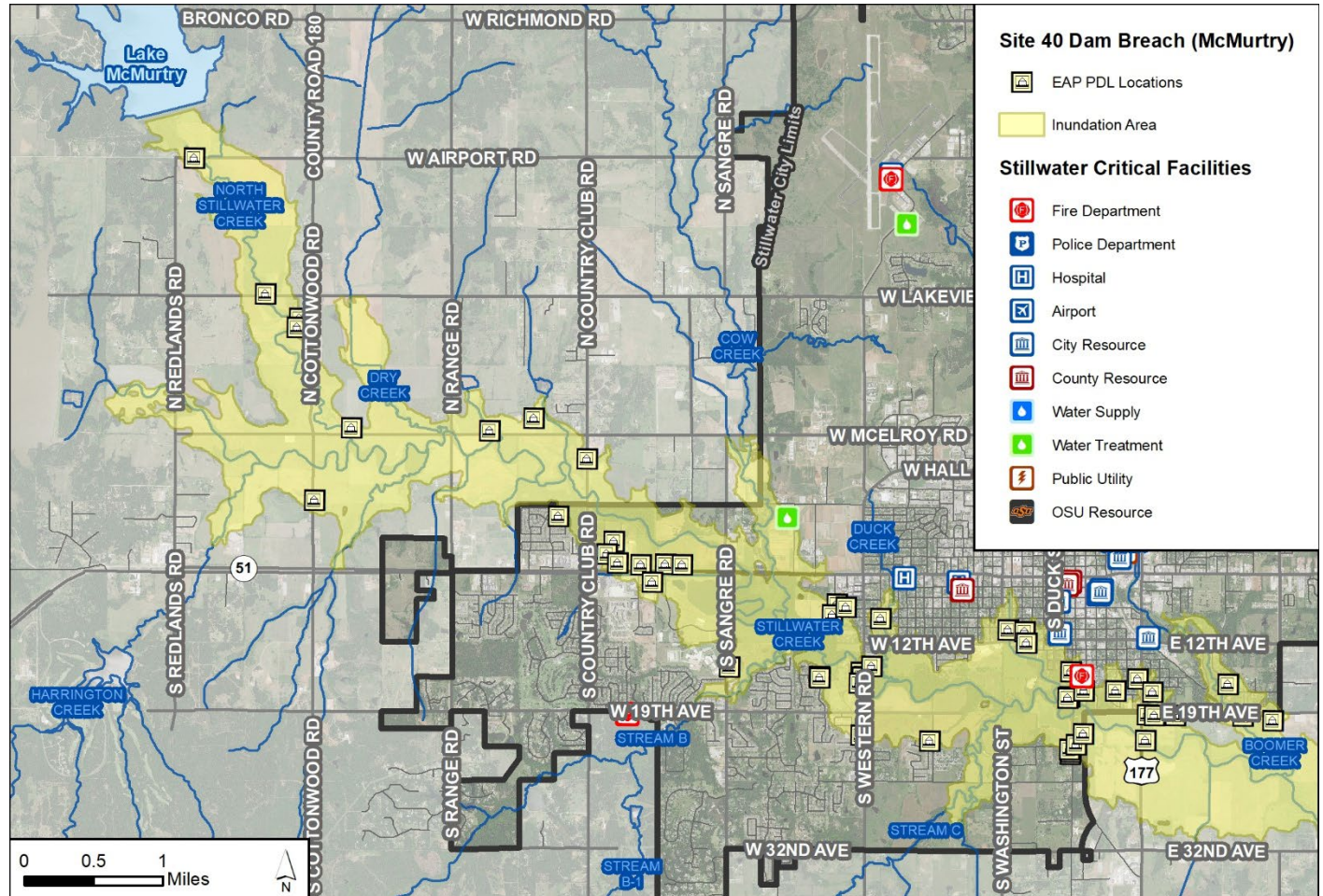


Table D-2 SCS-Stillwater Creek (NRCS Site 39) Dam Failure Wave Arrival Table

House/Business Number	Distance Downstream (ft.)	Water Depth Above Ground Level (ft.)	Time to Peak Flow (HH:MM)
STW0302	1,188	2.1	00:15
STW0309	1,452	7.2	00:15
STW0312	2,491	0.8	00:15
STW0316	2,781	10.6	00:15
STW0319	1,914	6.4	00:15
STW0320	2,297	7.2	00:15
STW0321	1,914	1.6	00:15
STW0024	31,651	3.7	02:00
STW0311	1,544	6.5	00:15



D.10. Lake McMurtry (NRCS Site 40) Dam





D.11. Ham's Lake (NRCS Site 46) Dam

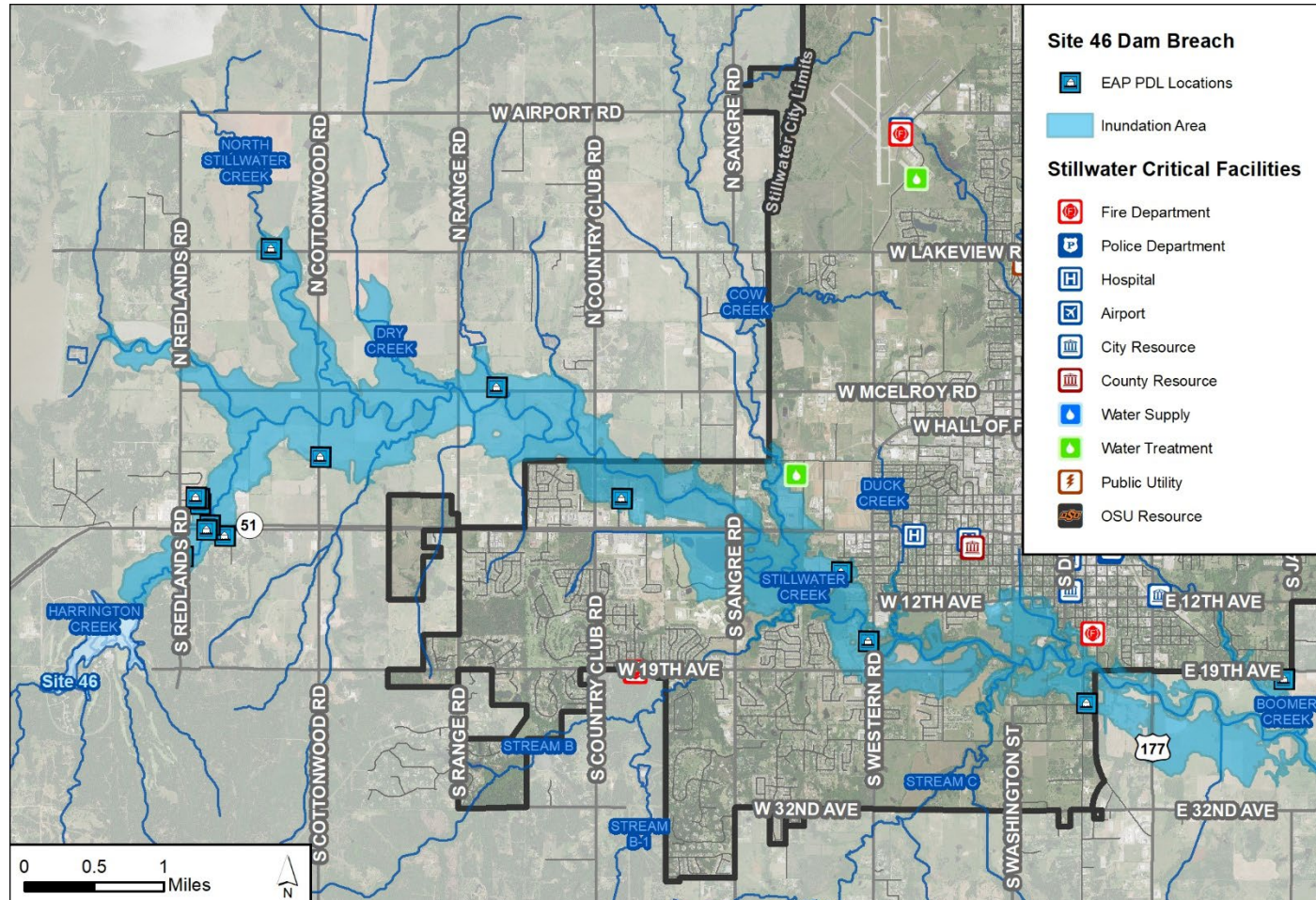




Table D-3 SCS-Stillwater Creek (NRCS Site 46) Dam Failure Wave Arrival Table

House/Business Number	Distance Downstream (ft.)	Water Depth Above Ground Level (ft.)	Time to Peak Flow (HH:MM)
STW0101	3,460	8.9	00:18
STW0103	4,752	2.6	00:19
STW0104	4,963	4.1	00:19
STW0105	4,963	3.1	00:19
STW0106	5,974	1.5	00:25
STW0107	6,170	2.9	00:26
STW0108	6,170	0.4	00:26
STW0208	11,280	4.5	00:50
STW0019	15,436	3.6	01:18
STW0024	25,787	3.5	02:08
STW0030	35,809	1.8	03:49
STW0050	51,017	0.8	05:37
STW0054	55,621	7.7	06:18
STW0066	67,505	0.4	08:78
STW0081	76,700	2.8	09:21



D.12. SCS-Stillwater Creek (NRCS Site 48) Dam

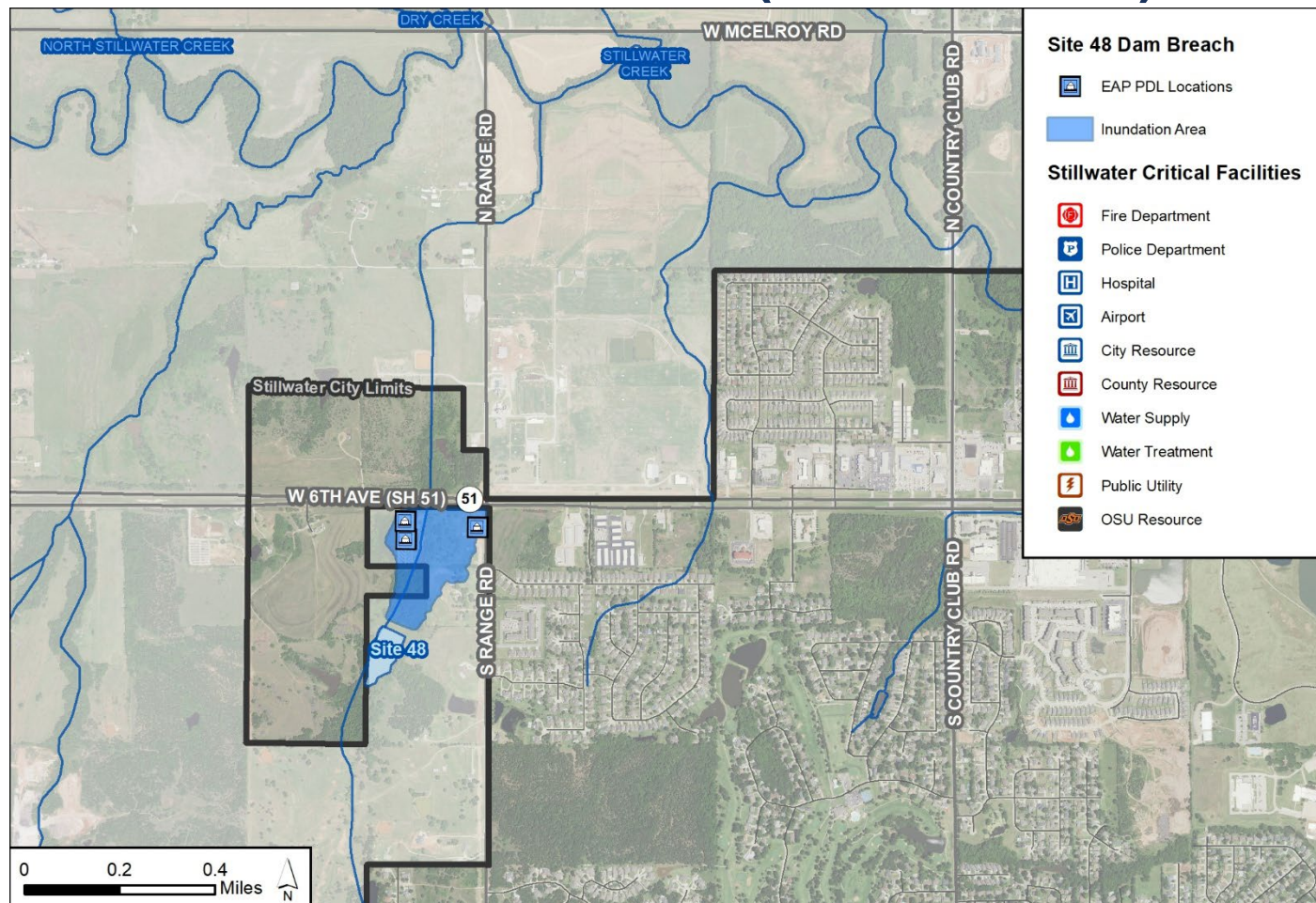


Table D-4 SCS-Stillwater Creek (NRCS Site 48) Dam Failure Wave Arrival Table

House/Business Number	Distance Downstream (ft.)	Water Depth Above Ground Level (ft.)	Time to Peak Flow (HH:MM)
STW0401	--	9.0	--
STW0415	--	4.6	--
STW0462	--	3.0	--



D.13. SCS-Stillwater Creek (NRCS Site 49A) Dam

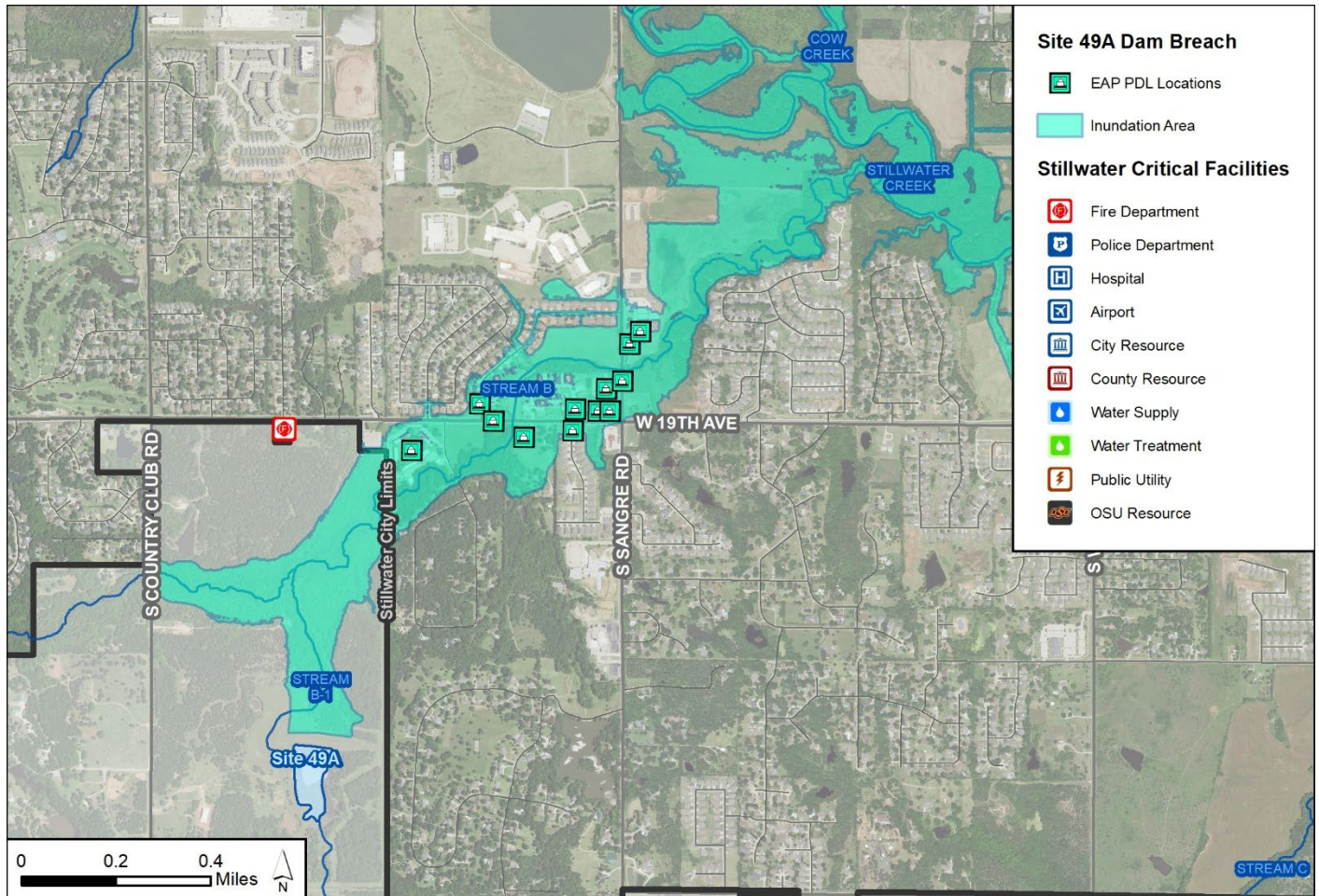




Table D-5 SCS-Stillwater Creek (NRCS Site 49A) Dam Failure Wave Arrival Table

PDL_ID	Point Type	Structures	Water Depth (feet above ground level)	Time to Peak Flow (HH:MM)
STW0820	Apartment	8	3.5	< 00:15
STW0821	House	1	2.7	00:19
STW0822	House	2	2.9	00:21
STW0823	Bridge	1	3.1	00:21
STW0824	House	15	2.0	00:24
STW0825	Apartment	19	3.8	00:24
STW0826	Commercial	1	0.8	00:24
STW0827	Commercial	1	0.9	00:24
STW0828	Apartment	5	6.0	00:27
STW0829	Bridge	1	5.7	00:28
STW0043	Commercial	1	0.2	00:34
STW0044	Commercial	1	2.9	00:32



D.14. SCS-Stillwater Creek (NRCS Site 49B) Dam

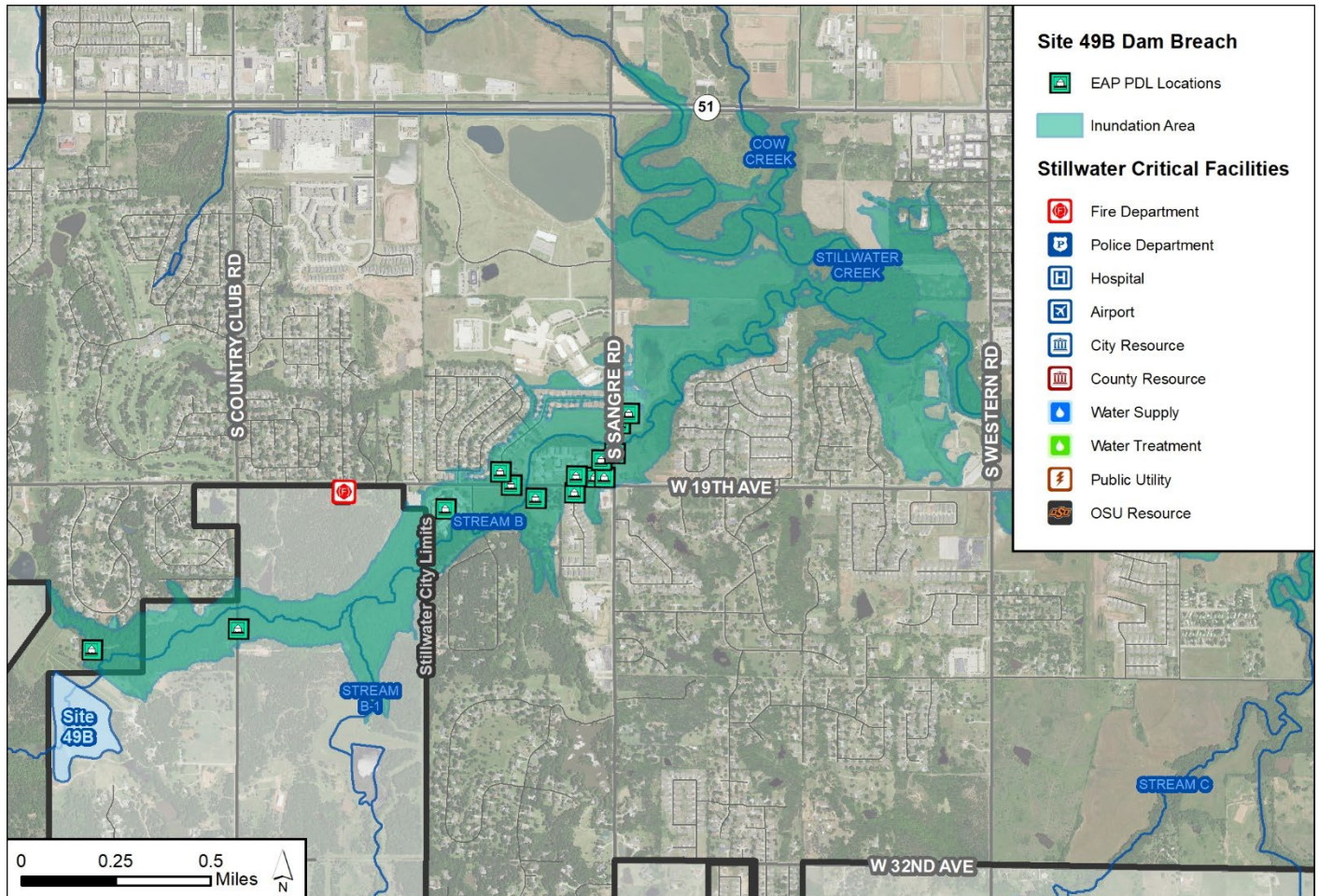




Table D-6 SCS-Stillwater Creek (NRCS Site 49B) Dam Failure Wave Arrival Table

PDL_ID	Point Type	Structures	Water Depth (feet above ground level)	Time to Peak Flow (HH:MM)
STW0810	House	1	1.4	< 00:15
STW0811	Bridge	1	4.3	< 00:15
STW0820	Apartment	8	4.1	00:26
STW0821	House	1	3.5	00:32
STW0822	House	3	3.8	00:34
STW0823	Bridge	1	4.0	00:34
STW0824	House	20	2.9	00:36
STW0825	Apartment	19	4.7	00:36
STW0826	Commercial	1	1.7	00:35
STW0827	Commercial	1	1.9	00:36
STW0828	Apartment	5	7.0	00:38
STW0829	Bridge	1	6.8	00:39
STW0843	Commercial	1	1.1	00:44
STW0844	Commercial	1	3.8	00:42



Appendix E Critical Facilities

On the following pages in this appendix is a table outlining the City of Stillwater's critical facilities, including the facility name and type, and the FEMA floodplain in which it's located.

Facility Name	Facility Type	FEMA Floodplain
Stillwater Regional Airport	Airport	Zone X (Area of Minimal Flood)
KOSR	Broadcasting Company	Zone X (Area of Minimal Flood)
Stillwater YMCA	Child Care	Zone X (Area of Minimal Flood)
First Presbyterian Preschool	Child Care	Zone X (Area of Minimal Flood)
Renaissance School @ Sangre	Child Care	Zone X (Area of Minimal Flood)
Covenant Community Day Care	Child Care	Zone X (Area of Minimal Flood)
First United Methodist E C C	Child Care	Zone X (Area of Minimal Flood)
Stillwater Early Head Start	Child Care	Zone AE (1 Pct Annual Chance Flood)
Oak Tree Children's Academy	Child Care	Zone AE (1 Pct Annual Chance Flood)
Renaissance School	Child Care	Zone X (Area of Minimal Flood)
Kid's World Learning Center Llc	Child Care	Zone X (Area of Minimal Flood)
Stillwater Head Start 0-5	Child Care	Zone X (Area of Minimal Flood)
Oklahoma State University-main Campus	College or Trade School	Zone X (Area of Minimal Flood)
Meridian Technology Center	College or Trade School	Zone AE (1 Pct Annual Chance Flood)
Payne County Courthouse	Courthouse	Zone X (Area of Minimal Flood)
Tap148970	Electric Substation	Zone X (Area of Minimal Flood)



Facility Name	Facility Type	FEMA Floodplain
Unknown118354	Electric Substation	Zone X (Area of Minimal Flood)
Unknown118673	Electric Substation	Zone X (Area of Minimal Flood)
Unknown119279	Electric Substation	Zone X (Area of Minimal Flood)
Unknown119318	Electric Substation	Zone X (Area of Minimal Flood)
Unknown119407	Electric Substation	Zone X (Area of Minimal Flood)
Unknown119408	Electric Substation	Zone X (Area of Minimal Flood)
Unknown119409	Electric Substation	Zone X (Area of Minimal Flood)
Unknown148977	Electric Substation	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 1	Emergency Medical Services	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 2	Emergency Medical Services	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 3	Emergency Medical Services	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 4	Emergency Medical Services	Zone X (Area of Minimal Flood)
Stillwater Emergency Operations Center	Emergency Operations Center	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 1	Fire Department	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 4	Fire Department	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 2	Fire Department	Zone X (Area of Minimal Flood)
Stillwater Fire Department Station 3	Fire Department	Zone X (Area of Minimal Flood)
Stillwater Medical Center	Hospital	Zone X (Area of Minimal Flood)
Boone Pickens Stadium	Major Sports Venues	Zone X (Area of Minimal Flood)



Facility Name	Facility Type	FEMA Floodplain
Gallagher-IBA Arena	Major Sports Venues	Zone X (Area of Minimal Flood)
Stillwater Creek Skilled Nursing & Therapy	Medical Nursing Home	Zone X (Area of Minimal Flood)
Brookdale Stillwater	Medical Nursing Home	Zone X (Area of Minimal Flood)
The Renaissance Of Stillwater-Assisted Living	Medical Nursing Home	Zone X (Area of Minimal Flood)
The Renaissance Of Stillwater-Memory Care	Medical Nursing Home	Zone X (Area of Minimal Flood)
Primrose Retirement Community Of Stillwater	Medical Nursing Home	Zone X (Area of Minimal Flood)
Golden Oaks Assisted Living	Medical Nursing Home	Zone X (Area of Minimal Flood)
Westhaven Nursing Home	Medical Nursing Home	Zone X (Area of Minimal Flood)
Payne County Health Department	Medical Public Health Dept	Zone X (Area of Minimal Flood)
Adams Medical Clinic Urgent Care Plus - Stillwater	Medical Urgent Care	Zone X (Area of Minimal Flood)
Countryside MHP	Mobile Home Park	Zone X (Area of Minimal Flood)
Eastern Villa MHP	Mobile Home Park	Zone X (Area of Minimal Flood)
Park West MHP	Mobile Home Park	Zone X (Area of Minimal Flood)
Not Available	Mobile Home Park	Zone X (Area of Minimal Flood)
Crestview MHP	Mobile Home Park	Zone X (Area of Minimal Flood)
Kingston Mobile Home Park	Mobile Home Park	Zone X (Area of Minimal Flood)
Not Available	Mobile Home Park	Zone X (Area of Minimal Flood)



Facility Name	Facility Type	FEMA Floodplain
B & H MHP	Mobile Home Park	Zone X (Area of Minimal Flood)
Pier 17-7	Mobile Home Park	Zone X (Area of Minimal Flood)
Varsity Village MHP	Mobile Home Park	Zone X (Area of Minimal Flood)
Not Available	Mobile Home Park	Zone X (Area of Minimal Flood)
Not Available	Mobile Home Park	Zone X (Area of Minimal Flood)
Not Available	Mobile Home Park	Zone X (Area of Minimal Flood)
Not Available	Mobile Home Park	Zone X (Area of Minimal Flood)
Sunnybrook Christian Church	Place of Worship	Zone X (Area of Minimal Flood)
Stillwater Church Of Christ	Place of Worship	Zone X (Area of Minimal Flood)
Hillcrest Baptist Church	Place of Worship	Zone X (Area of Minimal Flood)
Southside Baptist Church	Place of Worship	Zone X (Area of Minimal Flood)
Islamic Society Of Stillwater	Place of Worship	Zone X (Area of Minimal Flood)
Payne County Sheriffs Office / Payne County Jail	Police Department	Zone X (Area of Minimal Flood)
Oklahoma State University - Stillwater Police	Police Department	Zone X (Area of Minimal Flood)
Stillwater Police Department	Police Department	Zone X (Area of Minimal Flood)
Boomer Lake Station	Power Plants	Zone X (Area of Minimal Flood)
Oklahoma State University	Power Plants	Zone X (Area of Minimal Flood)
Stillwater Energy Center	Power Plants	Zone X (Area of Minimal Flood)



Facility Name	Facility Type	FEMA Floodplain
Covenant Community Christian School	Private School	Zone X (Area of Minimal Flood)
Sunnybrook Christian School	Private School	Zone X (Area of Minimal Flood)
Stillwater HS	Public School	Zone X (Area of Minimal Flood)
Sangre Ridge ES	Public School	Zone X (Area of Minimal Flood)
Stillwater MS	Public School	Zone X (Area of Minimal Flood)
Stillwater JHS	Public School	Zone X (Area of Minimal Flood)
Richmond ES	Public School	Zone X (Area of Minimal Flood)
Highland Park ES	Public School	Zone X (Area of Minimal Flood)
Skyline ES	Public School	Zone X (Area of Minimal Flood)
Will Rogers ES	Public School	Zone AE (1 Pct Annual Chance Flood)
Westwood ES	Public School	Zone X (Area of Minimal Flood)
Airgas Store	Petroleum	Zone X (Area of Minimal Flood)
Dolese Bros Co Stillwater Batch	Industrial	Zone X (Area of Minimal Flood)
LOWE'S OF STILLWATER, OK (#241)	Commercial	Zone X (Area of Minimal Flood)
ASCO Aerospace USA	Industrial	Zone X (Area of Minimal Flood)
Fractionation Research Unit	Industrial	Zone X (Area of Minimal Flood)
OSU Department of Parking and Transportation Services	Utility - Other	Zone X (Area of Minimal Flood)
National Standard	Industrial	Zone X (Area of Minimal Flood)



Facility Name	Facility Type	FEMA Floodplain
Eagle Redi-Mlx Plant 24	Industrial	Zone X (Area of Minimal Flood)
Suddenlink Communications	Utility - Telecom	Zone X (Area of Minimal Flood)
Armstrong Flooring	Commercial	Zone X (Area of Minimal Flood)
Chickasaw Telecommunications	Utility - Telecom	Zone X (Area of Minimal Flood)
EEC--Stillwater #1-14H	Petroleum	Zone X (Area of Minimal Flood)
EEC--Stillwater #2-14H	Petroleum	Zone X (Area of Minimal Flood)
EEC--Stillwater #3-14H	Petroleum	Zone X (Area of Minimal Flood)
Glacier--Schroeder	Petroleum	Floodway
Heritage Petroleum--Cole #1	Petroleum	Zone X (Area of Minimal Flood)
Heritage Petroleum--Duck #1	Petroleum	Zone X (Area of Minimal Flood)
Heritage Petroleum--Fairlawn	Petroleum	Zone X (Area of Minimal Flood)
Heritage Petroleum--Main #1	Petroleum	Zone X (Area of Minimal Flood)
Heritage Petroleum--Moore #1	Petroleum	Shaded Zone X (0.2 Pct Annual Chance Flood)
Heritage Petroleum--Pope #1	Petroleum	Zone X (Area of Minimal Flood)
Heritage Petroleum--Rist A #1	Petroleum	Zone AE (1 Pct Annual Chance Flood)
Heritage Petroleum--Rist B #1(Shut in)	Petroleum	Floodway
Heritage Petroleum--Stillwater Lower Skinner Sand Unit Tank Battery	Petroleum	Zone AE (1 Pct Annual Chance Flood)



Facility Name	Facility Type	FEMA Floodplain
Heritage Petroleum--Stillwater West Red Fork Unit Tank Battery	Petroleum	Zone X (Area of Minimal Flood)
Energy Services Central Plant	Utility - Other	Zone X (Area of Minimal Flood)
Oklahoma State University--Water Treatment Plant	Utility - Water	Zone X (Area of Minimal Flood)
Oklahoma State University-West Chilled Water Plant	Utility - Water	Zone X (Area of Minimal Flood)
OSU--Water Treatment Plant	Utility - Water	<Null>
Pawnee Oil & Gas--Duncan #1	Petroleum	Zone X (Area of Minimal Flood)
Southwestern Bell--STILLWATER CO - R65165	Utility - Telecom	Zone X (Area of Minimal Flood)
Stillwater Milling Company	Industrial	Shaded Zone X (0.2 Pct Annual Chance Flood)
TAG Petroleum - Concrete #1	Petroleum	Zone X (Area of Minimal Flood)
TAG Petroleum - Cross Trust #1 & #3	Petroleum	Zone X (Area of Minimal Flood)
TAG Petroleum - Deek	Petroleum	Zone X (Area of Minimal Flood)
TAG Petroleum - Overholt #1	Petroleum	Zone X (Area of Minimal Flood)
TAG Petroleum - Overholt SWD	Petroleum	Zone X (Area of Minimal Flood)
TruGreen LP (Stillwater)	Commercial	Zone X (Area of Minimal Flood)

Forge ahead.



WSBENG.COM

REPORT TO: CITY COUNCIL

MEETING DATE: SEPTEMBER 8, 2025



Agenda Item:	8.b. CC-25-133
Previous/Related Action:	
Background/Issue:	On August 18, 2024, Trustees awarded NewGen Strategies LLC with a contract to conduct Waste Management's 2025 solid waste study. Part of the study included a cost-of-service analysis. The analysis concluded that Waste Management is under recovering revenue in residential, commercial, and roll-off services based on current rates.
Proposal/Solution:	As part of their contract NewGen Strategies LLC completed a rate design for residential, commercial, and roll-off services. The new rate design was created to ensure these services are properly recovering revenue. The new rates would be implemented on January 1 from 2026 to 2030.
Financial Source/Impact:	N/A
Related Strategic Priority:	#1 EFFECTIVE SERVICES & ACCOUNTABLE GOVERNMENT
Recommended Action/Motion:	Recommendation to adopt resolution proposing a percentage increase to all Waste Management Department services and to restructure commercial and roll-off fees to be more in line with the industry standard.
Prepared By:	Matt Faulkner, Waste Mgmt. Dir.
Reviewed By:	Matt Faulkner Christy Driskel Teresa Kadavy
Submitted By:	Brady Moore, City Manager

Attachments

1. CC-2025-24 Solid Waste Rates (SUA-2025-7)
2. CC-2025-24 ATTACHMENT Solid Waste Collection Rate Schedule (CLEAN SCHEDULE)
3. CC-2025-24 ATTACHMENT Solid Waste Collection Rate Schedule (TRACKED CHANGES)
4. FINAL Solid Waste Assessment and Management Study_7-30-25
5. Waste Management Fee Schedule
6. WM Rate Presentaion

RESOLUTION NO. CC-2025-24; SUA-2025-7

A RESOLUTION ADOPTING A REVISED RATE SCHEDULE FOR SOLID WASTE COLLECTION SERVICES; PROVIDING FOR SUBSEQUENT RATE INCREASES; AND PROVIDING EFFECTIVE DATES

WHEREAS, the City of Stillwater (City) and the Stillwater Utilities Authority (SUA) are the owners and operators of a Solid Waste Management Division that provides services to residents and businesses located within and outside the corporate limits of the City of Stillwater; and

WHEREAS, City and SUA are charged with the duty and responsibility to set solid waste collection service rates; and

WHEREAS, it is the responsibility of the City Council and SUA Trustees to ensure that the solid waste collection service rates are adequate to meet the financial requirements of the City and SUA to provide said services; and

WHEREAS, the City and SUA retained a professional consultant, NewGen Strategies & Solutions, to conduct a Solid Waste Assessment and Management Study which included an Operational Assessment, Cost of Service and Rate Design, and recommended rate adjustments; and

WHEREAS, the study included findings of the following challenges for the Solid Waste Management Division: industry-wide supply chain issues, specifically equipment availability; staffing challenges due to a high demand for CDL drivers; and inflation challenges, specifically related to fuel cost volatility; all of which support the recommendation that rate adjustments are necessary to address the rising costs of providing the services; and

WHEREAS, the Stillwater City Council and the Stillwater Utilities Authority have determined that to maintain a high quality of service, the rates and fees charged to the customers should be increased commensurate with the increase in costs to provide the services to its customers;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STILLWATER, OKLAHOMA AND THE TRUSTEES OF THE STILLWATER UTILITIES AUTHORITY:

Section 1. That the rates set forth on the attached Solid Waste Collection Services Rate Schedule are hereby established and set for the year(s) 2026-2030 and can only be revised by subsequent Resolution of the City Council and Stillwater Utilities Authority.

Section 2. The rates set forth in this Resolution shall be effective as follows:

2026 Rates effective January 1, 2026
2027 Rates effective January 1, 2027
2028 Rates effective January 1, 2028
2029 Rates effective January 1, 2029
2030 Rates effective January 1, 2030

PASSED AND ADOPTED THIS 8th DAY OF SEPTEMBER 2025.

CITY OF STILLWATER, OKLAHOMA
a Municipal Corporation

STILLWATER UTILITIES AUTHORITY
a Public Trust

WILLIAM H. JOYCE
MAYOR/CHAIR

(SEAL)
ATTEST:

TERESA KADAVY
CITY CLERK/SECRETARY

APPROVED AS TO FORM AND LEGALITY THIS 8th DAY OF SEPTEMBER
2025.

KIMBERLY CARNLEY
CITY ATTORNEY/GENERAL COUNSEL

SOLID WASTE COLLECTION SERVICES

RATE SCHEDULE

I. Residential Collection

Inside City Limits	2026	2027	2028	2029	2030
(1) 35 Gallon Cart	\$17.36	\$18.75	\$20.07	\$21.27	\$22.33
(1) 48 Gallon Cart	\$18.79	\$20.29	\$21.72	\$23.02	\$24.17
(1) 64 Gallon Cart	\$20.23	\$21.85	\$23.38	\$24.78	\$26.02
(2) 64 Gallon Carts	\$33.88	\$36.50	\$39.06	\$41.40	\$43.47
(1) 96 Gallon Cart	\$23.11	\$24.96	\$26.70	\$28.31	\$29.72
(2) 96 Gallon Carts	\$37.82	\$40.85	\$43.71	\$46.33	\$48.65
(1) 96 Gallon Cart (paid house side service)	\$35.17	\$37.99	\$40.65	\$43.09	\$45.24
Outside City Limits					
(1) 35 Gallon Cart	\$37.32	\$40.31	\$43.13	\$45.72	\$48.00
(1) 64 Gallon Cart	\$38.74	\$41.84	\$44.77	\$47.45	\$49.82
(1) 96 Gallon Cart	\$41.63	\$44.96	\$48.10	\$50.99	\$53.54
(2) 96 Gallon Carts	\$56.34	\$60.85	\$65.11	\$69.02	\$72.47
Other Residential Services					
Poly-Cart Cleaning/Exchange Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Poly-Cart Replacement Fee	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Residential Extra Dump (per cart)	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Non-payment delivery fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Non-payment pick-up fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00

1. The residential waste collection fees apply to 1- and 2-family dwelling units
2. A cart cleaning fee of twenty dollars (\$20.00) shall apply to exchanges in cart sizes. This fee will not be applied to cart exchanges that result from the exchange of damaged or unserviceable carts.
3. The customer shall pay a fee of fifty dollars (\$50.00) for each cart replaced more than once within any twelve (12) month period.
4. For residential waste collection service outside City limits, the service area shall be limited to no more than (3) miles from the City limits and the customer's property must be accessible by a paved road or other surface deemed acceptable by the Waste Management Director.
5. Customers who have a physical impairment that prevents them from meeting the physical requirements for curb-side service (i.e., difficulty maneuvering carts to the collection point) are eligible to receive house-side service at the curbside rate upon confirmation of the physical impairment by the City.
6. Each inside city limits residential waste collection customer shall be entitled to two (2) special collection days at the same address within any twelve (12) month period. The special collection service provides for the collection, removal and disposal of up to 20 bags, boxes, or combination of bags and boxes of waste at no additional charge. These special collection services will be subject to the standard Waste Management Department guidelines for weight, size, material types and curbside placement. The City reserves the right to schedule a special collection day or days for all residential waste collection customers and if such day or days are scheduled, such day or days will count towards each customer's no charge special collection at the same address for that twelve (12) month period. Special collection services provided to residential waste collection customers in excess of two (2) at the same address within any twelve (12) month period shall be billed at the commercial waste collection rate of fifty dollars (\$25.00) per cubic yard.

7. Bulk items will be collected, removed and disposed of for twenty dollars (\$25.00) per bulk item. Bulk items are defined as those items that cannot be placed inside a residential waste cart or trash bag due to dimensions or weight.
8. Refrigerator units will not be collected unless the refrigeration system has been purged by a licensed technician and certification of such removal by the licensed technician is posted on the refrigerator unit.
9. A return trip fee of fifteen dollars (\$15.00) will be applied to each cart serviced outside of standard service daily route.
10. Residential waste collection customers whose carts are picked up due to non-payment will be subject to a Non-payment cart pick up fee of fifteen dollars (\$15.00).
11. Residential waste collection customer who request cart delivery after non-payment will be subject to Non-payment delivery fee of fifteen dollars (\$15.00).

II. Multi-Family Residential Collection

	2026	2027	2028	2029	2030
Inside City Limits (per unit)	\$18.67	\$20.17	\$21.58	\$22.87	\$24.02
Multi-Family Residential Non-Subscription	\$2.99	\$3.23	\$3.45	\$3.66	\$3.84

1. The multi-family residential waste collection fees apply to multi-family residential units (3 or more dwelling units contained within a building) and mobile home parks (3 or more mobile homes located on the same property).
2. All multi-family residential and mobile home park customers will be provided with a dumpster or dumpsters unless it is determined by the waste management department that the use of a dumpster or dumpsters is not feasible.
3. The owner of the multi-family residential units or a mobile home park may choose to either have the collection service fee charged directly to each multi-family residential unit or mobile home or have the collection services fee billed to the property owner.
4. The owner of multi-family residential units and/or a mobile home park may choose to opt-out of the solid waste collection services. All non-subscribing multi-family residential units and/or mobile home parks shall be billed a monthly non-subscription fee. All non-subscription fees will be billed directly to the unit or mobile home unless the owner requests in writing that the fees be billed to them. Fees billed to the owner of multi-family units or mobile home parks shall be based on the total number of multi-family units or mobile home spaces regardless of occupancy.

III. Bulk Collection Service

	2026	2027	2028	2029	2030
Bulk Collection (per item)	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
Special Collection Fee (per 2 cubic yards)	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00

IV. Commercial Collection

Inside City Limits	2026	2027	2028	2029	2030
2-yard X 1 day Per Week	\$47.27	\$51.99	\$57.19	\$62.91	\$69.20
2-yard X 2 day Per Week	\$94.53	\$103.99	\$114.39	\$125.82	\$138.40
2-yard X 3 day Per Week	\$139.30	\$150.44	\$162.48	\$175.48	\$189.52
2-yard X 4 day Per Week	\$185.65	\$200.50	\$216.54	\$233.87	\$252.58
2-yard X 5 day Per Week	\$232.06	\$250.62	\$270.67	\$292.33	\$315.72
2-yard X 6 day Per Week	\$278.61	\$300.90	\$324.97	\$350.97	\$379.05
3-yard X 1 day Per Week	\$68.07	\$72.16	\$76.49	\$81.08	\$85.94
3-yard X 2 day Per Week	\$136.17	\$144.34	\$153.00	\$162.18	\$171.91
3-yard X 3 day Per Week	\$200.40	\$208.41	\$216.75	\$225.42	\$234.44
3-yard X 4 day Per Week	\$256.93	\$267.21	\$277.90	\$289.01	\$300.57
3-yard X 5 day Per Week	\$321.15	\$334.00	\$347.36	\$361.25	\$375.70
3-yard X 6 day Per Week	\$385.37	\$400.78	\$416.82	\$433.49	\$450.83
4-yard X 1 day Per Week	\$89.38	\$92.95	\$96.67	\$99.57	\$102.56
4-yard X 2 day Per Week	\$171.90	\$171.90	\$171.90	\$177.06	\$182.37
4-yard X 3 day Per Week	\$257.97	\$257.97	\$257.97	\$257.97	\$257.97
4-yard X 4 day Per Week	\$343.78	\$343.78	\$343.78	\$343.78	\$343.78
4-yard X 5 day Per Week	\$429.73	\$429.73	\$429.73	\$429.73	\$429.73
4-yard X 6 day Per Week	\$515.91	\$515.91	\$515.91	\$515.91	\$515.91
Downtown Dumpster Fee	\$40.57	\$43.82	\$47.32	\$51.11	\$55.20

Outside City Limits

2-yard X 1 day Per Week	\$52.00	\$57.20	\$62.92	\$69.21	\$76.13
2-yard X 2 day Per Week	\$103.98	\$114.38	\$125.82	\$138.40	\$152.24
2-yard X 3 day Per Week	\$153.23	\$165.49	\$178.73	\$193.03	\$208.47
2-yard X 4 day Per Week	\$204.22	\$220.55	\$238.20	\$257.25	\$277.83
2-yard X 5 day Per Week	\$255.27	\$275.69	\$297.75	\$321.57	\$347.30
2-yard X 6 day Per Week	\$306.47	\$330.99	\$357.47	\$386.07	\$416.96
3-yard X 1 day Per Week	\$74.88	\$79.37	\$84.13	\$89.18	\$94.53
3-yard X 2 day Per Week	\$149.79	\$158.78	\$168.30	\$178.40	\$189.10
3-yard X 3 day Per Week	\$220.44	\$229.26	\$238.43	\$247.96	\$257.88
3-yard X 4 day Per Week	\$282.62	\$293.92	\$305.68	\$317.91	\$330.63
3-yard X 5 day Per Week	\$353.27	\$367.40	\$382.10	\$397.38	\$413.28
3-yard X 6 day Per Week	\$423.91	\$440.87	\$458.50	\$476.84	\$495.91
4-yard X 1 day Per Week	\$98.31	\$102.24	\$106.33	\$109.52	\$112.81
4-yard X 2 day Per Week	\$189.09	\$189.09	\$189.09	\$194.76	\$200.60
4-yard X 3 day Per Week	\$283.77	\$283.77	\$283.77	\$283.77	\$283.77
4-yard X 4 day Per Week	\$378.16	\$378.16	\$378.16	\$378.16	\$378.16
4-yard X 5 day Per Week	\$472.70	\$472.70	\$472.70	\$472.70	\$472.70
4-yard X 6 day Per Week	\$567.50	\$567.50	\$567.50	\$567.50	\$567.50

Other Commercial Services	2026	2027	2028	2029	2030
Shared Dumpster	\$28.89	\$30.05	\$31.25	\$32.50	\$33.80
Non-Subscription	\$28.89	\$30.05	\$31.25	\$32.50	\$33.80
Commercial Extra Dump	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Commercial Cart Service (96 gal only)	\$23.11	\$24.96	\$26.70	\$28.31	\$29.72
Cardboard 20 yard / Roll-off	\$195.00	\$195.00	\$195.00	\$195.00	\$195.00
Cardboard 30 yard / Roll-off	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
Cardboard 2-yard X 1 day Per Week	\$23.63	\$26.00	\$28.60	\$30.88	\$30.88
Cardboard 4-yard X 3 day Per Week	\$128.99	\$128.99	\$128.99	\$128.99	\$128.99

1. For commercial waste collection service outside City Limits, the service area shall be limited to no more than (3) miles from the City limits and the customer's property must be accessible by a paved road or other surface deemed acceptable by the Waste Management Director.
2. Commercial businesses that generate no more waste than a typical residential waste customer and do not require a dumpster may subscribe to the Residential Waste Collection service once a suitable collection point has been established by the Waste Management Department. The service and rate will be equivalent to the (1) 96-gallon cart except that special clean-up services will not be included in the standard service.
3. A return trip fee of fifty dollars (\$50.00) will be applied to each dumpster serviced outside of the standard service daily route.
4. Businesses within the same building or relative location may choose to share a dumpster. The minimum shared dumpster fee shall be twenty-eight dollars and eighty-nine cent (\$28.89) per participating business, for one (2) cubic yard dumpster serviced once per week. For those shared businesses requiring more than the basic shared service the fee will be based on dumpster size and number of days serviced which shall be distributed amongst the applicable businesses.
5. The owner of a commercial business may choose to opt-out of the solid waste collection services. All non-subscribing businesses shall be billed non-subscription fee.

V. Roll Off Container Services

Inside City Limits	2026	2027	2028	2029	2030
Delivery Fee	\$104.00	\$108.16	\$112.49	\$116.99	\$121.67
Rental Fee	\$104.00	\$108.16	\$112.49	\$116.99	\$121.67
Non-use rental fee	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Pull Fee	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Disposal fee (per ton)	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22
Compactor - Pull Fee	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Compactor - disposal fee (per ton)	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22
Compactor Service - Reversal Fee	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00

Outside City Limits					
Delivery Fee	\$114.40	\$118.98	\$123.74	\$128.68	\$133.83
Rental Fee	\$114.40	\$118.98	\$123.74	\$128.68	\$133.83
Non-use rental fee	\$335.00	\$348.40	\$362.34	\$376.83	\$391.90
Pull Fee	\$335.00	\$348.40	\$362.34	\$376.83	\$391.90
Disposal fee (per ton)	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22

1. If a roll-off container is held for greater than 30 days, there will be a Rental Fee assessed.
2. If a roll-off container is held for greater than 30 days without being pulled there will be a Non-use rental fee assessed.

VI. Convenience Collection Center

	2026	2027	2028	2029	2030
Motor Oil Fee (per qt)	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Anti-Freeze (per gal)	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
35 Gallon Garbage Bag Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Small Furniture Item Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Medium Furniture item Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Large Furniture Item Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Small Electronic Item Fee	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Medium Electronic Item Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Large Electronic Item Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Compact Fluorescent Bulb Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Fluorescent Bulb Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Any Size T.V. or Monitor Fee	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
1 Gallon of Latex Paint Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
5 Gallons of Latex Paint Fee	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Small Wood Load Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Medium Wood Load Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Large Wood Load Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Bagged Carpet Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Small Carpet Load Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Medium Carpet Load Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Large Carpet Load Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Extra-Large Carpet Load Fee	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
Any Size Mattress Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
City of Stillwater Blue Bags (5 pack)	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
City of Stillwater Blue Bags (case for retailers)	\$256.00	\$256.00	\$256.00	\$256.00	\$256.00

1. Residential Use Only
2. The City Manager shall be authorized to temporarily waive selected Convenience Collection Center drop-off fees when deemed appropriate for special and/or seasonal events
3. Green waste drop-off is for City residential utilities customers only.

**** CHANGES HIGHLIGHTED VIA UNDERLINE AND STRIKETHROUGH**
SOLID WASTE COLLECTION SERVICES
RATE SCHEDULE

I. Residential Collection

Inside City Limits	Current	2026	2027	2028	2029	2030
(1) 35 Gallon Cart	\$15.93	<u>\$17.36</u>	<u>\$18.75</u>	<u>\$20.07</u>	<u>\$21.27</u>	<u>\$22.33</u>
(1) 48 Gallon Cart	\$17.24	<u>\$18.79</u>	<u>\$20.29</u>	<u>\$21.72</u>	<u>\$23.02</u>	<u>\$24.17</u>
(1) 64 Gallon Cart	\$18.56	<u>\$20.23</u>	<u>\$21.85</u>	<u>\$23.38</u>	<u>\$24.78</u>	<u>\$26.02</u>
(2) 64 Gallon Carts	\$31.01	<u>\$33.88</u>	<u>\$36.50</u>	<u>\$39.06</u>	<u>\$41.40</u>	<u>\$43.47</u>
(1) 96 Gallon Cart	\$21.20	<u>\$23.11</u>	<u>\$24.96</u>	<u>\$26.70</u>	<u>\$28.31</u>	<u>\$29.72</u>
(2) 96 Gallon Carts	\$34.70	<u>\$37.82</u>	<u>\$40.85</u>	<u>\$43.71</u>	<u>\$46.33</u>	<u>\$48.65</u>
(1) 96 Gallon Cart (paid house side service)	\$32.27	<u>\$35.17</u>	<u>\$37.99</u>	<u>\$40.65</u>	<u>\$43.09</u>	<u>\$45.24</u>
Outside City Limits						
(1) 35 Gallon Cart	\$34.24	<u>\$37.32</u>	<u>\$40.31</u>	<u>\$43.13</u>	<u>\$45.72</u>	<u>\$48.00</u>
(1) 64 Gallon Cart	\$35.54	<u>\$38.74</u>	<u>\$41.84</u>	<u>\$44.77</u>	<u>\$47.45</u>	<u>\$49.82</u>
(1) 96 Gallon Cart	\$38.19	<u>\$41.63</u>	<u>\$44.96</u>	<u>\$48.10</u>	<u>\$50.99</u>	<u>\$53.54</u>
(2) 96 Gallon Carts	\$51.69	<u>\$56.34</u>	<u>\$60.85</u>	<u>\$65.11</u>	<u>\$69.02</u>	<u>\$72.47</u>
Other Residential Services						
Poly-Cart Cleaning/Exchange Fee	\$40.00	<u>\$20.00</u>	\$20.00	\$20.00	\$20.00	\$20.00
Poly-Cart Replacement Fee	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Residential Extra Dump (per cart)	\$40.00	<u>\$15.00</u>	\$15.00	\$15.00	\$15.00	\$15.00
Non-payment delivery fee	\$15.00	<u>\$15.00</u>	\$15.00	\$15.00	\$15.00	\$15.00
Non-payment pick-up fee	\$15.00	<u>\$15.00</u>	\$15.00	\$15.00	\$15.00	\$15.00

1. The residential waste collection fees apply to 1- and 2-family dwelling units
2. A cart cleaning fee of twenty dollars (\$20.00) shall apply to exchanges in cart sizes. This fee will not be applied to cart exchanges that result from the exchange of damaged or unserviceable carts.
3. The customer shall pay a fee of fifty dollars (\$50.00) for each cart replaced more than once within any twelve (12) month period.
4. For residential waste collection service outside City limits, the service area shall be limited to no more than (3) miles from the City limits and the customer's property must be accessible by a paved road or other surface deemed acceptable by the Waste Management Director.
5. Customers who have a physical impairment that prevents them from meeting the physical requirements for curb-side service (i.e., difficulty maneuvering carts to the collection point) are eligible to receive house-side service at the curbside rate upon confirmation of the physical impairment by the City.
6. Each inside city limits residential waste collection customer shall be entitled to two (2) special collection days at the same address within any twelve (12) month period. The special collection service provides for the collection, removal and disposal of up to 20 bags, boxes, or combination of bags and boxes of waste at no additional charge. These special collection services will be subject to the standard Waste Management Department guidelines for weight, size, material types and curbside placement. The City reserves the right to schedule a special collection day or days for all residential waste collection customers and if such day or days are scheduled, such day or days will count towards each customer's no charge special collection at the same address for that twelve (12) month period. Special collection services provided to residential waste collection customers in

**** CHANGES HIGHLIGHTED VIA UNDERLINE AND STRIKETHROUGH**

excess of two (2) at the same address within any twelve (12) month period shall be billed at the commercial waste collection rate of fifty dollars (\$25.00) per cubic yard.

7. Bulk items will be collected, removed and disposed of for twenty dollars (\$25.00) per bulk item. Bulk items are defined as those items that cannot be placed inside a residential waste cart or trash bag due to dimensions or weight.
8. Refrigerator units will not be collected unless the refrigeration system has been purged by a licensed technician and certification of such removal by the licensed technician is posted on the refrigerator unit.
9. A return trip fee of fifteen dollars (\$15.00) will be applied to each cart serviced outside of standard service daily route.
10. Residential waste collection customers whose carts are picked up due to non-payment will be subject to a Non-payment cart pick up fee of fifteen dollars (\$15.00).
11. Residential waste collection customer who request cart delivery after non-payment will be subject to Non-payment delivery fee of fifteen dollars (\$15.00).

II. Multi-Family Residential Collection

	Current	2026	2027	2028	2029	2030
Inside City Limits (per unit)	\$17.13	<u>\$18.67</u>	<u>\$20.17</u>	<u>\$21.58</u>	<u>\$22.87</u>	<u>\$24.02</u>
Multi-Family Residential Non-Subscription	\$2.74	<u>\$2.99</u>	<u>\$3.23</u>	<u>\$3.45</u>	<u>\$3.66</u>	<u>\$3.84</u>

1. The multi-family residential waste collection fees apply to multi-family residential units (3 or more dwelling units contained within a building) and mobile home parks (3 or more mobile homes located on the same property).
2. All multi-family residential and mobile home park customers will be provided with a dumpster or dumpsters unless it is determined by the waste management department that the use of a dumpster or dumpsters is not feasible.
3. The owner of the multi-family residential units or a mobile home park may choose to either have the collection service fee charged directly to each multi-family residential unit or mobile home or have the collection services fee billed to the property owner.
4. The owner of multi-family residential units and/or a mobile home park may choose to opt-out of the solid waste collection services. All non-subscribing multi-family residential units and/or mobile home parks shall be billed a monthly non-subscription fee. All non-subscription fees will be billed directly to the unit or mobile home unless the owner requests in writing that the fees be billed to them. Fees billed to the owner of multi-family units or mobile home parks shall be based on the total number of multi-family units or mobile home spaces regardless of occupancy.

III. Bulk Collection Service

	Current	2026	2027	2028	2029	2030
Bulk Collection (per item)	\$20.00	<u>\$25.00</u>	\$25.00	\$25.00	\$25.00	\$25.00
Special Collection Fee (per 2 cubic yards)	\$20.00	<u>\$25.00</u>	\$25.00	\$25.00	\$25.00	\$25.00

**** CHANGES HIGHLIGHTED VIA UNDERLINE AND STRIKETHROUGH**

IV. Commercial Collection

Inside City Limits	Current	2026	2027	2028	2029	2030
2-yard X 1 day Per Week	\$42.97	<u>\$47.27</u>	<u>\$51.99</u>	<u>\$57.19</u>	<u>\$62.91</u>	<u>\$69.20</u>
2-yard X 2 day Per Week	\$85.94	<u>\$94.53</u>	<u>\$103.99</u>	<u>\$114.39</u>	<u>\$125.82</u>	<u>\$138.40</u>
2-yard X 3 day Per Week	\$128.98	<u>\$139.30</u>	<u>\$150.44</u>	<u>\$162.48</u>	<u>\$175.48</u>	<u>\$189.52</u>
2-yard X 4 day Per Week	\$171.90	<u>\$185.65</u>	<u>\$200.50</u>	<u>\$216.54</u>	<u>\$233.87</u>	<u>\$252.58</u>
2-yard X 5 day Per Week	\$214.87	<u>\$232.06</u>	<u>\$250.62</u>	<u>\$270.67</u>	<u>\$292.33</u>	<u>\$315.72</u>
2-yard X 6 day Per Week	\$257.97	<u>\$278.61</u>	<u>\$300.90</u>	<u>\$324.97</u>	<u>\$350.97</u>	<u>\$379.05</u>
3-yard X 1 day Per Week	\$64.22	<u>\$68.07</u>	<u>\$72.16</u>	<u>\$76.49</u>	<u>\$81.08</u>	<u>\$85.94</u>
3-yard X 2 day Per Week	\$128.46	<u>\$136.17</u>	<u>\$144.34</u>	<u>\$153.00</u>	<u>\$162.18</u>	<u>\$171.91</u>
3-yard X 3 day Per Week	\$192.69	<u>\$200.40</u>	<u>\$208.41</u>	<u>\$216.75</u>	<u>\$225.42</u>	<u>\$234.44</u>
3-yard X 4 day Per Week	\$256.93	<u>\$256.93</u>	<u>\$267.21</u>	<u>\$277.90</u>	<u>\$289.01</u>	<u>\$300.57</u>
3-yard X 5 day Per Week	\$321.15	<u>\$321.15</u>	<u>\$334.00</u>	<u>\$347.36</u>	<u>\$361.25</u>	<u>\$375.70</u>
3-yard X 6 day Per Week	\$385.37	<u>\$385.37</u>	<u>\$400.78</u>	<u>\$416.82</u>	<u>\$433.49</u>	<u>\$450.83</u>
4-yard X 1 day Per Week	\$85.94	<u>\$89.38</u>	<u>\$92.95</u>	<u>\$96.67</u>	<u>\$99.57</u>	<u>\$102.56</u>
4-yard X 2 day Per Week	\$171.90	<u>\$171.90</u>	<u>\$171.90</u>	<u>\$171.90</u>	<u>\$177.06</u>	<u>\$182.37</u>
4-yard X 3 day Per Week	\$257.97	<u>\$257.97</u>	<u>\$257.97</u>	<u>\$257.97</u>	<u>\$257.97</u>	<u>\$257.97</u>
4-yard X 4 day Per Week	\$343.78	<u>\$343.78</u>	<u>\$343.78</u>	<u>\$343.78</u>	<u>\$343.78</u>	<u>\$343.78</u>
4-yard X 5 day Per Week	\$429.73	<u>\$429.73</u>	<u>\$429.73</u>	<u>\$429.73</u>	<u>\$429.73</u>	<u>\$429.73</u>
4-yard X 6 day Per Week	\$515.94	<u>\$515.91</u>	<u>\$515.91</u>	<u>\$515.91</u>	<u>\$515.91</u>	<u>\$515.91</u>
Downtown Dumpster Fee	<u>\$0.00</u>	<u>\$40.57</u>	<u>\$43.82</u>	<u>\$47.32</u>	<u>\$51.11</u>	<u>\$55.20</u>

Outside City Limits

2-yard X 1 day Per Week	<u>\$47.27</u>	<u>\$52.00</u>	<u>\$57.20</u>	<u>\$62.92</u>	<u>\$69.21</u>	<u>\$76.13</u>
2-yard X 2 day Per Week	<u>\$94.53</u>	<u>\$103.98</u>	<u>\$114.38</u>	<u>\$125.82</u>	<u>\$138.40</u>	<u>\$152.24</u>
2-yard X 3 day Per Week	<u>\$141.88</u>	<u>\$153.23</u>	<u>\$165.49</u>	<u>\$178.73</u>	<u>\$193.03</u>	<u>\$208.47</u>
2-yard X 4 day Per Week	<u>\$189.09</u>	<u>\$204.22</u>	<u>\$220.55</u>	<u>\$238.20</u>	<u>\$257.25</u>	<u>\$277.83</u>
2-yard X 5 day Per Week	<u>\$236.36</u>	<u>\$255.27</u>	<u>\$275.69</u>	<u>\$297.75</u>	<u>\$321.57</u>	<u>\$347.30</u>
2-yard X 6 day Per Week	<u>\$283.77</u>	<u>\$306.47</u>	<u>\$330.99</u>	<u>\$357.47</u>	<u>\$386.07</u>	<u>\$416.96</u>
3-yard X 1 day Per Week	<u>\$70.64</u>	<u>\$74.88</u>	<u>\$79.37</u>	<u>\$84.13</u>	<u>\$89.18</u>	<u>\$94.53</u>
3-yard X 2 day Per Week	<u>\$141.34</u>	<u>\$149.79</u>	<u>\$158.78</u>	<u>\$168.30</u>	<u>\$178.40</u>	<u>\$189.10</u>
3-yard X 3 day Per Week	<u>\$211.96</u>	<u>\$220.44</u>	<u>\$229.26</u>	<u>\$238.43</u>	<u>\$247.96</u>	<u>\$257.88</u>
3-yard X 4 day Per Week	<u>\$282.62</u>	<u>\$282.62</u>	<u>\$293.92</u>	<u>\$305.68</u>	<u>\$317.91</u>	<u>\$330.63</u>
3-yard X 5 day Per Week	<u>\$353.27</u>	<u>\$353.27</u>	<u>\$367.40</u>	<u>\$382.10</u>	<u>\$397.38</u>	<u>\$413.28</u>
3-yard X 6 day Per Week	<u>\$423.94</u>	<u>\$423.91</u>	<u>\$440.87</u>	<u>\$458.50</u>	<u>\$476.84</u>	<u>\$495.91</u>
4-yard X 1 day Per Week	<u>\$94.53</u>	<u>\$98.31</u>	<u>\$102.24</u>	<u>\$106.33</u>	<u>\$109.52</u>	<u>\$112.81</u>
4-yard X 2 day Per Week	<u>\$189.09</u>	<u>\$189.09</u>	<u>\$189.09</u>	<u>\$189.09</u>	<u>\$194.76</u>	<u>\$200.60</u>
4-yard X 3 day Per Week	<u>\$283.77</u>	<u>\$283.77</u>	<u>\$283.77</u>	<u>\$283.77</u>	<u>\$283.77</u>	<u>\$283.77</u>
4-yard X 4 day Per Week	<u>\$378.16</u>	<u>\$378.16</u>	<u>\$378.16</u>	<u>\$378.16</u>	<u>\$378.16</u>	<u>\$378.16</u>
4-yard X 5 day Per Week	<u>\$472.70</u>	<u>\$472.70</u>	<u>\$472.70</u>	<u>\$472.70</u>	<u>\$472.70</u>	<u>\$472.70</u>
4-yard X 6 day Per Week	<u>\$567.50</u>	<u>\$567.50</u>	<u>\$567.50</u>	<u>\$567.50</u>	<u>\$567.50</u>	<u>\$567.50</u>

**** CHANGES HIGHLIGHTED VIA UNDERLINE AND STRIKETHROUGH**

Other Commercial Services	Current	2026	2027	2028	2029	2030
Shared Dumpster	\$27.78	<u>\$28.89</u>	<u>\$30.05</u>	<u>\$31.25</u>	<u>\$32.50</u>	<u>\$33.80</u>
Non-Subscription	\$27.78	<u>\$28.89</u>	<u>\$30.05</u>	<u>\$31.25</u>	<u>\$32.50</u>	<u>\$33.80</u>
Commercial Extra Dump	\$40.00	<u>\$50.00</u>	<u>\$50.00</u>	<u>\$50.00</u>	<u>\$50.00</u>	<u>\$50.00</u>
Commercial Cart Service (96 gal only)	\$21.20	<u>\$23.11</u>	<u>\$24.96</u>	<u>\$26.70</u>	<u>\$28.31</u>	<u>\$29.72</u>
Cardboard 20 yard / Roll-off	\$195.00	\$195.00	\$195.00	\$195.00	\$195.00	\$195.00
Cardboard 30 yard / Roll-off	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
Cardboard 2-yard X 1 day Per Week	\$0.00	<u>\$23.63</u>	<u>\$26.00</u>	<u>\$28.60</u>	<u>\$30.88</u>	<u>\$30.88</u>
Cardboard 4-yard X 3 day Per Week	\$0.00	<u>\$128.99</u>	<u>\$128.99</u>	<u>\$128.99</u>	<u>\$128.99</u>	<u>\$128.99</u>

1. For commercial waste collection service outside City Limits, the service area shall be limited to no more than (3) miles from the City limits and the customer's property must be accessible by a paved road or other surface deemed acceptable by the Waste Management Director.
2. Commercial businesses that generate no more waste than a typical residential waste customer and do not require a dumpster may subscribe to the Residential Waste Collection service once a suitable collection point has been established by the Waste Management Department. The service and rate will be equivalent to the (1) 96-gallon cart except that special clean-up services will not be included in the standard service.
3. A return trip fee of fifty dollars (\$50.00) will be applied to each dumpster serviced outside of the standard service daily route.
4. Businesses within the same building or relative location may choose to share a dumpster. The minimum shared dumpster fee shall be twenty-eight dollars and eighty-nine cent (\$28.89) per participating business, for one (2) cubic yard dumpster serviced once per week. For those shared businesses requiring more than the basic shared service the fee will be based on dumpster size and number of days serviced which shall be distributed amongst the applicable businesses.
5. The owner of a commercial business may choose to opt-out of the solid waste collection services. All non-subscribing businesses shall be billed non-subscription fee.

V. Roll Off Container Services

Inside City Limits	Current	2026	2027	2028	2029	2030
Delivery Fee	\$100.00	<u>\$104.00</u>	<u>\$108.16</u>	<u>\$112.49</u>	<u>\$116.99</u>	<u>\$121.67</u>
Rental Fee	\$100.00	<u>\$104.00</u>	<u>\$108.16</u>	<u>\$112.49</u>	<u>\$116.99</u>	<u>\$121.67</u>
Non-use rental fee	\$0.00	<u>\$300.00</u>	<u>\$312.00</u>	<u>\$324.48</u>	<u>\$337.46</u>	<u>\$350.96</u>
Pull Fee	\$330.00	<u>\$300.00</u>	<u>\$312.00</u>	<u>\$324.48</u>	<u>\$337.46</u>	<u>\$350.96</u>
Disposal fee (per ton)	\$0.00	<u>\$42.93</u>	<u>\$44.65</u>	<u>\$46.43</u>	<u>\$48.29</u>	<u>\$50.22</u>
Compactor - Pull Fee	\$0.00	<u>\$300.00</u>	<u>\$312.00</u>	<u>\$324.48</u>	<u>\$337.46</u>	<u>\$350.96</u>
Compactor - disposal fee (per ton)	\$46.94	<u>\$42.93</u>	<u>\$44.65</u>	<u>\$46.43</u>	<u>\$48.29</u>	<u>\$50.22</u>
Compactor Service - Reversal Fee	\$0.00	<u>\$75.00</u>	<u>\$75.00</u>	<u>\$75.00</u>	<u>\$75.00</u>	<u>\$75.00</u>
Outside City Limits						
Delivery Fee	\$110.00	<u>\$114.40</u>	<u>\$118.98</u>	<u>\$123.74</u>	<u>\$128.68</u>	<u>\$133.83</u>
Rental Fee	\$110.00	<u>\$114.40</u>	<u>\$118.98</u>	<u>\$123.74</u>	<u>\$128.68</u>	<u>\$133.83</u>
Non-use rental fee	\$0.00	<u>\$335.00</u>	<u>\$348.40</u>	<u>\$362.34</u>	<u>\$376.83</u>	<u>\$391.90</u>
Pull Fee	\$363.00	<u>\$335.00</u>	<u>\$348.40</u>	<u>\$362.34</u>	<u>\$376.83</u>	<u>\$391.90</u>
Disposal fee (per ton)	\$0.00	<u>\$42.93</u>	<u>\$44.65</u>	<u>\$46.43</u>	<u>\$48.29</u>	<u>\$50.22</u>

**** CHANGES HIGHLIGHTED VIA UNDERLINE AND STRIKETHROUGH**

1. If a roll-off container is held for greater than 30 days, there will be a Rental Fee assessed.
2. If a roll-off container is held for greater than 30 days without being pulled there will be a Non-use rental fee assessed.

VI. Convenience Collection Center

	Current	2026	2027	2028	2029	2030
Motor Oil Fee (per qt)	\$0.20	<u>\$0.25</u>	\$0.25	\$0.25	\$0.25	\$0.25
Anti-Freeze (per gal)	\$0.00	<u>\$1.50</u>	\$1.50	\$1.50	\$1.50	\$1.50
35 Gallon Garbage Bag Fee	\$1.50	<u>\$2.00</u>	\$2.00	\$2.00	\$2.00	\$2.00
Small Furniture Item Fee	\$5.00	<u>\$10.00</u>	\$10.00	\$10.00	\$10.00	\$10.00
Medium Furniture item Fee	\$10.00	<u>\$15.00</u>	\$15.00	\$15.00	\$15.00	\$15.00
Large Furniture Item Fee	\$15.00	<u>\$20.00</u>	\$20.00	\$20.00	\$20.00	\$20.00
Small Electronic Item Fee	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Medium Electronic Item Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Large Electronic Item Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Compact Fluorescent Bulb Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Fluorescent Bulb Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Any Size T.V. or Monitor Fee	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
1 Gallon of Latex Paint Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
5 Gallons of Latex Paint Fee	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Small Wood Load Fee	\$5.00	<u>\$10.00</u>	\$10.00	\$10.00	\$10.00	\$10.00
Medium Wood Load Fee	\$10.00	<u>\$15.00</u>	\$15.00	\$15.00	\$15.00	\$15.00
Large Wood Load Fee	\$15.00	<u>\$20.00</u>	\$20.00	\$20.00	\$20.00	\$20.00
Bagged Carpet Fee	\$1.50	<u>\$2.00</u>	\$2.00	\$2.00	\$2.00	\$2.00
Small Carpet Load Fee	\$5.00	<u>\$10.00</u>	\$10.00	\$10.00	\$10.00	\$10.00
Medium Carpet Load Fee	\$10.00	<u>\$15.00</u>	\$15.00	\$15.00	\$15.00	\$15.00
Large Carpet Load Fee	\$15.00	<u>\$20.00</u>	\$20.00	\$20.00	\$20.00	\$20.00
Extra-Large Carpet Load Fee	\$20.00	<u>\$25.00</u>	\$25.00	\$25.00	\$25.00	\$25.00
Any Size Mattress Fee	\$5.00	<u>\$10.00</u>	\$10.00	\$10.00	\$10.00	\$10.00
City of Stillwater Blue Bags (5 pack)	\$7.50	<u>\$10.00</u>	\$10.00	\$10.00	\$10.00	\$10.00
City of Stillwater Blue Bags (case for retailers)	\$192.20	<u>\$256.00</u>	\$256.00	\$256.00	\$256.00	\$256.00

1. Residential Use Only
2. The City Manager shall be authorized to temporarily waive selected Convenience Collection Center drop-off fees when deemed appropriate for special and/or seasonal events
3. Green waste drop-off is for City residential utilities customers only.



Final Report

SOLID WASTE ASSESSMENT AND MANAGEMENT STUDY

The City of
Stillwater
OKLAHOMA

Prepared for:
City of Stillwater
3015 N. Airport Industrial Access Road
Stillwater, OK 74075

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8140 North Mopac Expressway
Suite 1-240
Austin, Texas 78759
Phone: (512) 900-8232

July 30, 2025

Mr. Matt Faulkner
Waste Management Director
City of Stillwater
3015 N. Airport Industrial Access Road
Stillwater, OK 74075

Re: Solid Waste Assessment and Management Study – Final Report

Dear Mr. Faulkner:

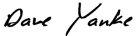
NewGen Strategies and Solutions, LLC (NewGen) is pleased to provide the City of Stillwater (City) with the enclosed final report summarizing our findings and recommendations from the conduct of the Solid Waste Assessment and Management Study (Study or Report). The Study details the results of our analysis of the forecasted costs of providing solid waste services to the City's solid waste customers and our recommendations for recovering these costs over the next five years. In addition, the Study provides our recommendations from several key operational evaluations, including the transition from rear-load to front-load commercial dumpster collection.

We appreciate the opportunity to provide our services to the City and would like to express our sincere appreciation to City staff. The dedication and assistance provided by City staff was essential to the completion of this Study.

Should you require additional information regarding the enclosed Report, please contact either one of us using the contact information below.

Sincerely,

NewGen Strategies and Solutions, LLC

DocuSigned by:

CE5CFF5DD30B4CA...

Dave Yanke
President
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dyanke@newgenstrategies.net

Signed by:

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EXECUTIVE SUMMARY

In August 2024, the City of Stillwater, Oklahoma (City) retained NewGen Strategies and Solutions, LLC (NewGen), to conduct a Solid Waste Assessment and Management Study (Study) for the City's solid waste utility (Utility). The Study includes a cost of service and rate design study (Section 2), as well as operational assessments of specific areas of the City's solid waste operation (Section 3).

For the cost of service portion of the Study, the purpose is to determine the cost of providing solid waste services, equitably distribute the costs to the appropriate customer classes, and design rates to safeguard the financial integrity of the Utility, including meeting the Utility's minimum reserve requirements.

The purpose of the operational assessment and evaluation of new services (Section 3) was to evaluate any opportunities to increase operational efficiencies, increase revenues, or reduce expenses, thereby having an impact on the rate recommendations for the cost of service.

Cost of Service and Rate Design

Figure ES-1 provides an overview of the cost of service and rate design process. Each of these steps is described in more detail in Section 2.1.

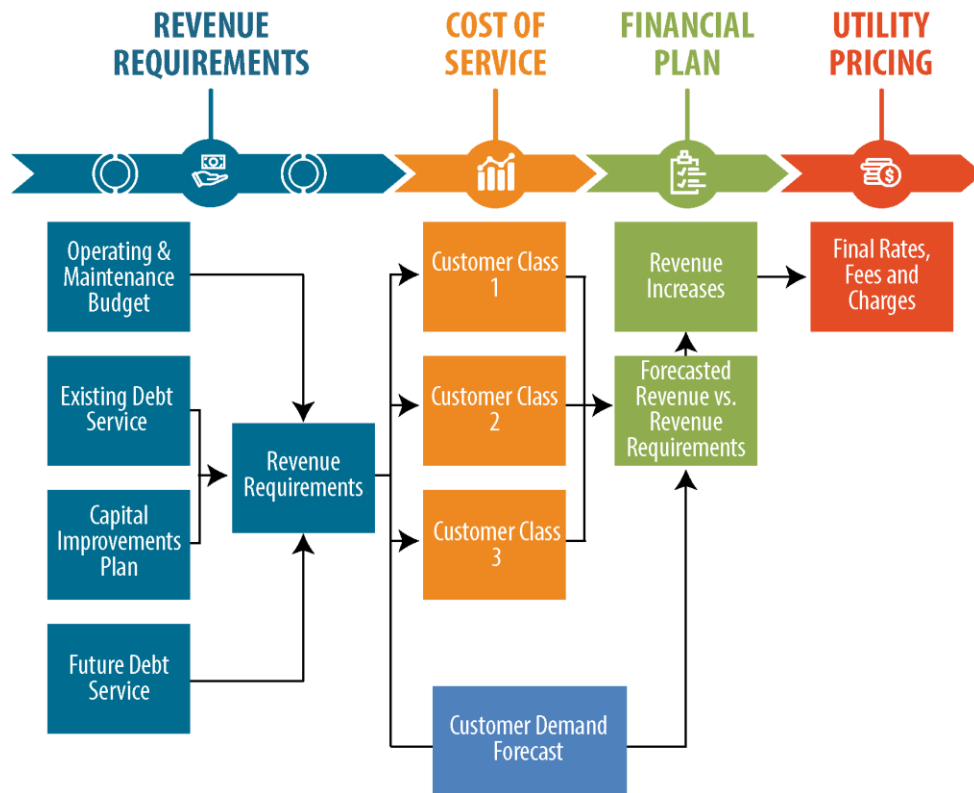


Figure ES-1 Cost of Service Methodology Overview

Revenue Requirement

In developing the Test Year revenue requirement for the City, NewGen used the FY 2025 adopted budget as the basis for the Test Year. NewGen compared the FY 2025 adopted budget to historical expenses for FY 2023 and FY 2024. Through this comparison and with input from City staff, NewGen made adjustments to ensure that the Test Year would reflect expenses that occur on a regular basis. In addition to developing the Test Year revenue requirement, NewGen forecasted the annual revenue requirement for FY 2026 through FY 2030. In developing this forecast, NewGen projected how costs would change over the years due to a variety of different inflation factors.

Table ES-1
Revenue Requirement

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Residential	\$4,710,638	\$4,972,301	\$5,156,766	\$5,347,563	\$5,641,735
Commercial	\$2,720,971	\$2,818,012	\$2,925,346	\$3,036,412	\$3,190,117
Roll-Off (Charged Customers)	\$266,080	\$276,028	\$286,654	\$297,669	\$313,416
Street Sweeping	\$481,007	\$500,177	\$521,531	\$543,615	\$563,080
Net Revenue Requirement	\$8,178,696	\$8,566,518	\$8,890,296	\$9,225,259	\$9,708,348

Current Rates

The current rates charged by the City are not sufficient to fully recover the revenue requirement shown in Table ES-1. As Figure ES-2 shows, residential and roll-off customers under-recover the most. If the City were not to increase its solid waste rates, the solid waste utility would incur a cumulative deficit of \$2.24 million over the forecast period.

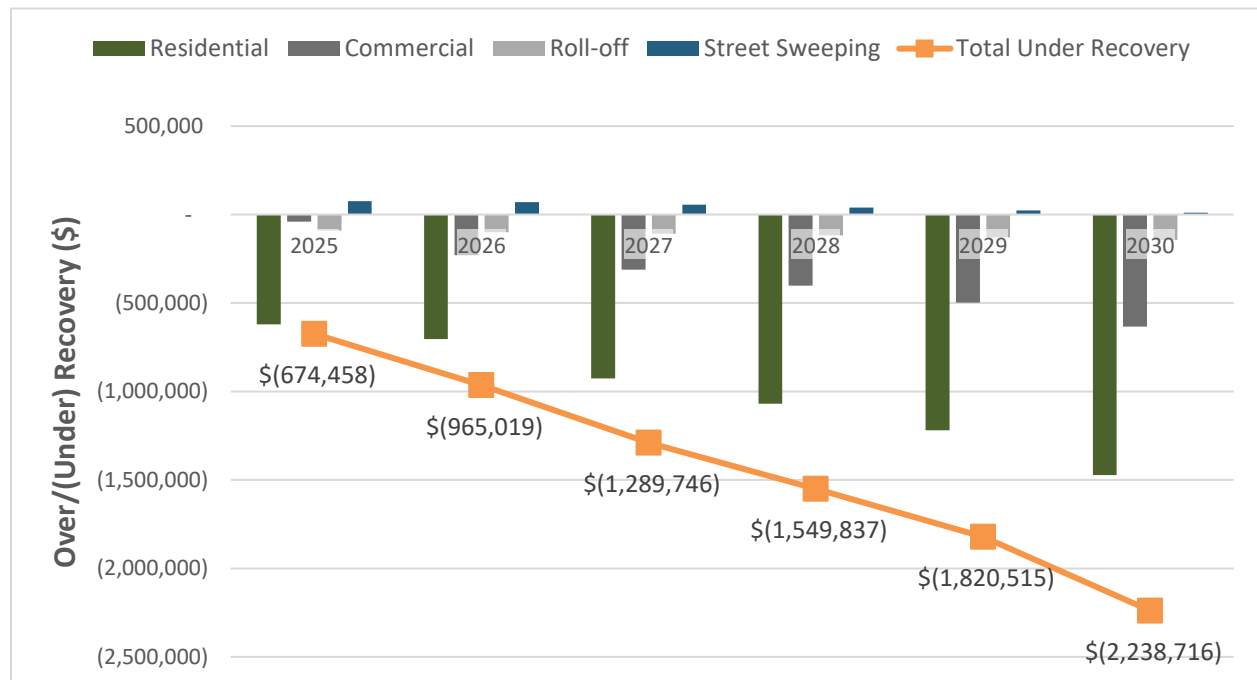


Figure ES-2 Revenue Sufficiency Forecast from Proposed Rates – Current Rates

Rate Recommendations

NewGen developed two alternative scenarios for the City. Scenario 1 reflects the current operation with no significant operational changes, but several rate structure changes (in addition to rate increases). Scenario 2 includes several revenue enhancement or expense reduction options that the City may consider implementing, detailed in Section 2.8. Table ES-2 summarizes the two scenarios forecasted by NewGen.

Table ES-2
Changes Included in Each Scenario

Changes Included	Scenario 1	Scenario 2
Residential Rate Increases	Yes	Yes
Revise Roll-Off and Compactor Fee Structure	Yes	Yes
Revise Commercial Dumpster Fee Structure	Yes	Yes
Utilize Existing Fee for Cardboard Roll-Offs	Yes	Yes
Implement Cardboard Baler	No	Yes
Implement Fee for Commercial Dumpster Recycling	No	Yes
Transition to Front-Load Dumpster Collection in FY 2029	No	Yes
Phase out 35-Gallon Cart Size	No	Yes

All rate increases discussed in this Study would be effective on January 1 of the relevant fiscal year.

Figure ES-3 shows the average rate increases by customer class for the five-year forecast period under Scenario 1. The roll-off rate increase for FY 2026 looks more significant compared to the other rates for two primary reasons: (1) roll-off rates were significantly under-recovering the cost of service, and (2) the rate structure change for roll-off created a one-time shift in the rates. There are no increases to the street sweeping fee.

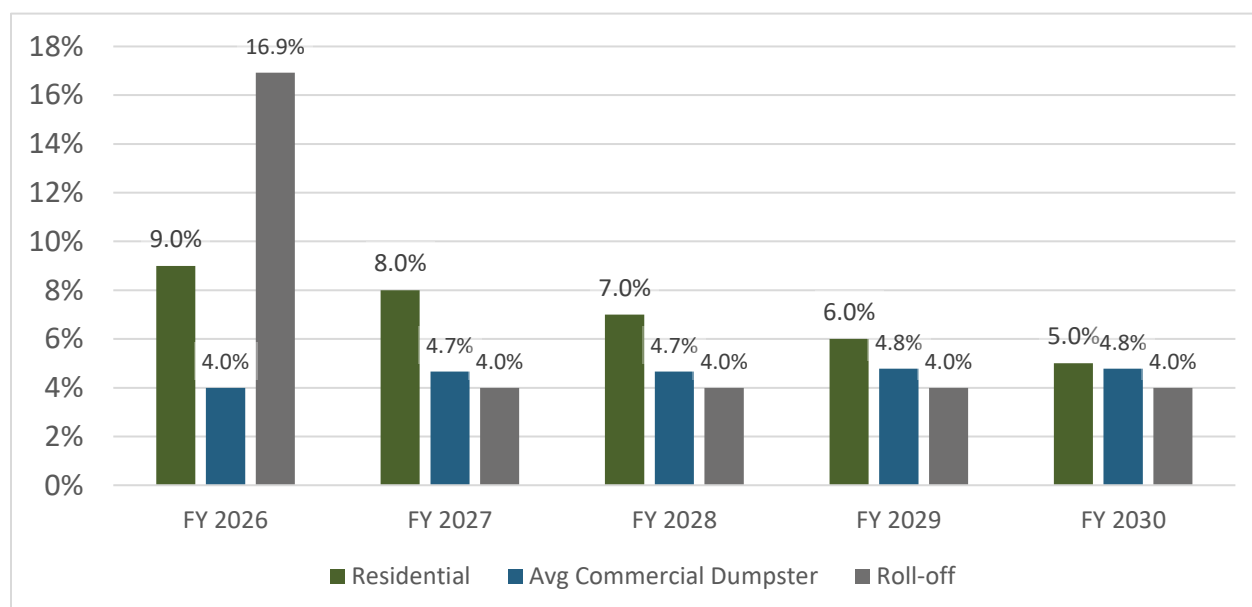


Figure ES-3 Rate Increases – Scenario 1

Executive Summary

Figure ES-4 shows the average rate increases by customer class for the five-year forecast period under Scenario 2. Rate increases for Scenario 2 are similar in magnitude to Scenario 1, but slightly lower for residential and commercial customers due to the additional changes shown in Table ES-2.

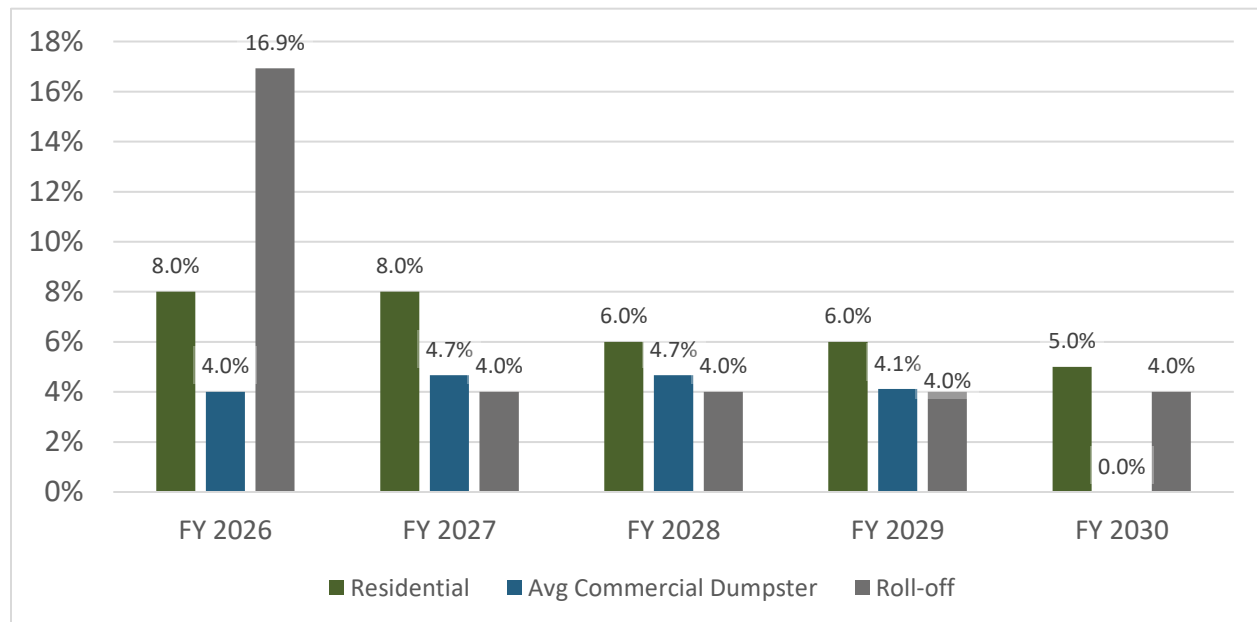


Figure ES-4 Rate Increases – Scenario 2

Revenue Sufficiency from Proposed Rates

Figure ES-5 shows the five-year forecast of revenue compared to the revenue requirement for each of the customer classes and in total for Scenario 1.

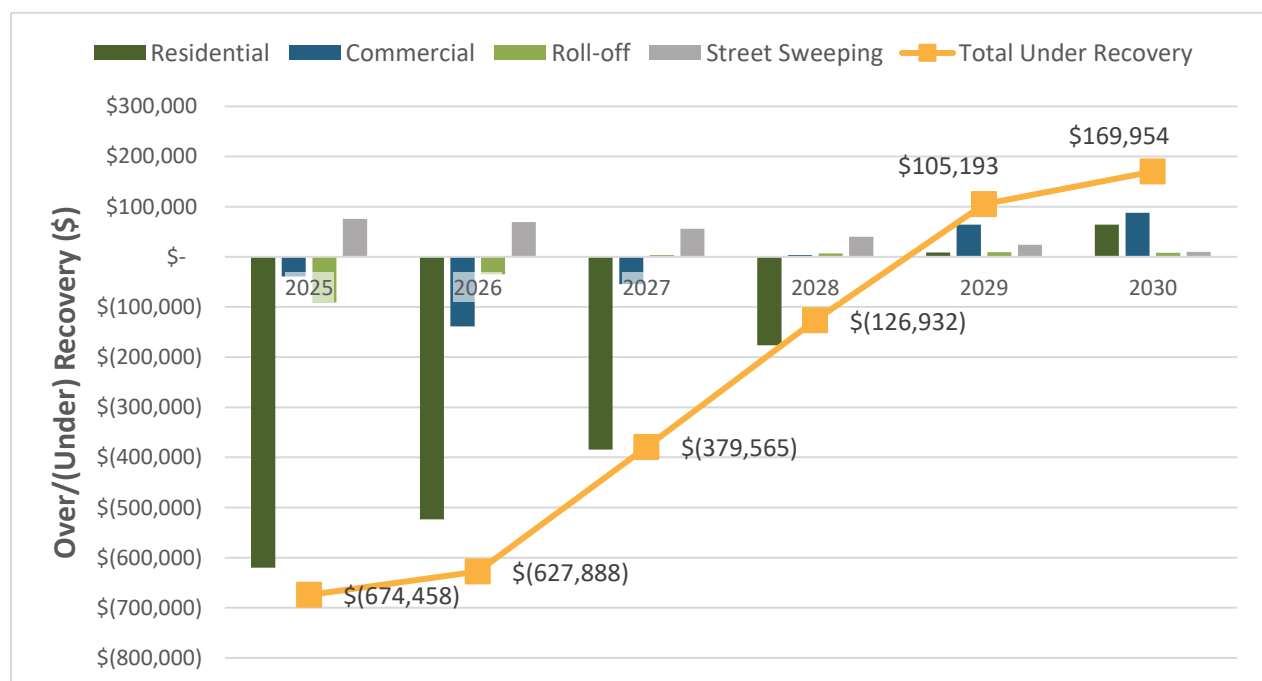


Figure ES-5 Revenue Sufficiency Forecast from Proposed Rates – Scenario 1

Figure ES-6 shows the five-year forecast of revenue compared to the revenue requirement for each of the customer classes and in total for Scenario 2.

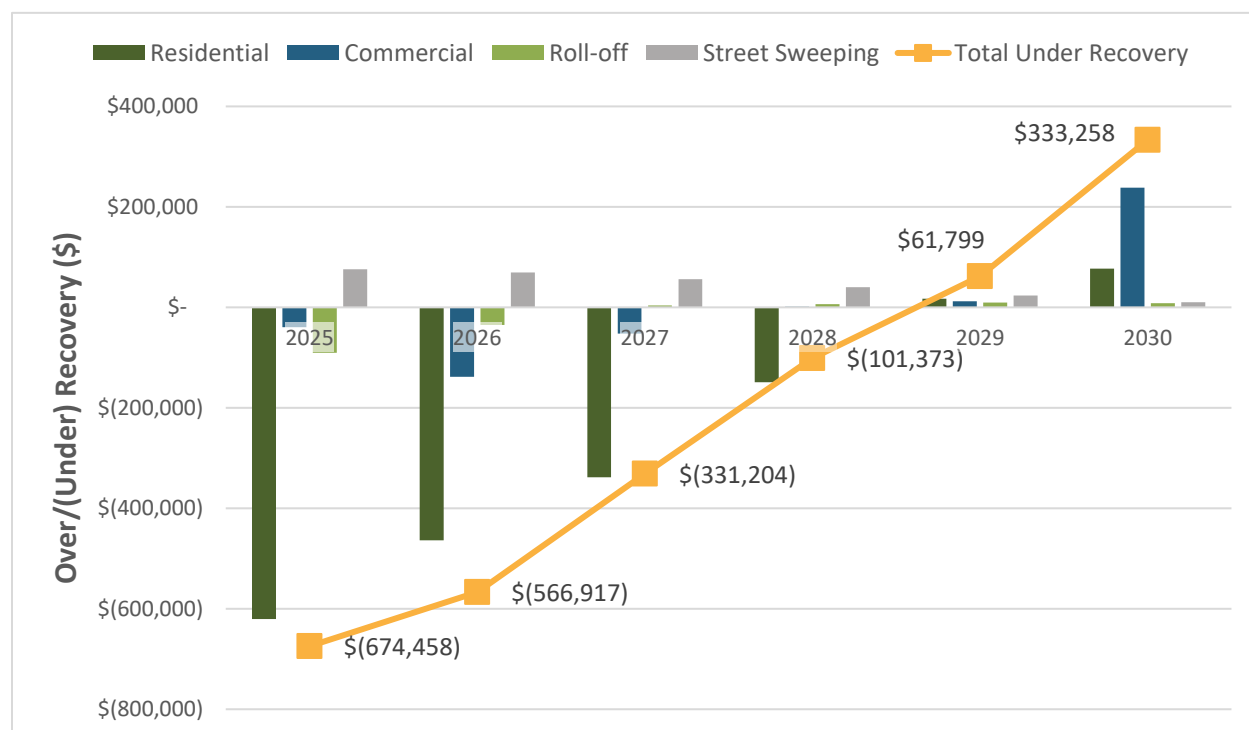


Figure ES-6 Revenue Sufficiency Forecast from Proposed Rates – Scenario 1

While the cumulative under recovery is still negative for both scenarios, the City is moving from an annual deficit to an annual surplus over the five-year forecast. The City's reserve funds allow the City to implement these changes over the five-year forecast period.

Reserves

NewGen estimated the impact each of the two scenarios will have on the City's reserves. See Section 2.11 for additional detail.

For both scenarios, the year-end fund balance exceeds the minimum balance of \$1 million in all years. While the fund balance nears the minimum at the end of FY 2028, the City would be able to add to the fund balance in FY 2029 and FY 2030.

Cost of Service Key Findings

Based on the analysis presented in this Study, below are the key findings from the cost of service study:

- Residential, commercial, and roll-off rates have not kept pace with rising costs.
- Residential service significantly under-recovers the cost of service. Rate increases and rate structure changes are needed to maintain a positive fund balance.
- Implementing the recommended operational improvements reduces the rate increases needed for residential and commercial customers.

- The rates for the City of Stillwater are comparable to the benchmarks, and other cities are facing the same upward pressure on rates.

Operational Assessment and Evaluation of New Services

Section 3 includes a review of several operational areas and services offered by the City or through a private contractor, and the evaluation of potential new services. The topics addressed in this section include:

- Commercial solid waste collection
- Convenience collection center
- Recycling processing
- Bulk waste collection

In addition to reviewing data from the City for all operations discussed in this section, three member of the NewGen Project Team conducted field observations and in-person interviews for three days (October 15-17, 2025).

The following provides a summary of the key findings and recommendations for Section 3.

Commercial Solid Waste Collection

- The City would benefit operationally and financially from transitioning from rear-load to front-load dumpster collection for commercial customers.
- Although there are upfront implementation costs, which were included in Scenario 2 of the cost of service analysis, the cost savings are projected to exceed \$300,000 per year once fully implemented.
- By providing front-load collection, the City would be able to offer its services to customers in the City, including Oklahoma State University, that currently utilize front-load containers.

Convenience Collection Center

- The City's convenience collection center is well-maintained and efficiently operated.
- The convenience collection center is relatively space-constrained with no room for expansion. On busier days, traffic can queue up on S. Perkins Road.
- NewGen recommends the addition of a cardboard baler to be placed on-site. This addition will yield an estimated \$67,600 in revenues and cost savings by allowing the City directly sell clean, source-separated cardboard.

Recycling Processing

- The Republic recycling staging facility utilized by the City is a relatively simple facility with limited operational requirements, minimizing the opportunities for cost savings.
- NewGen believes the City should continue to contract with Republic rather than constructing and operating its own facility based on the current recycling tonnage levels.
- If tonnage levels increase by 25-50%, the City could reconsider developing its own recycling staging facility or baling facility.

Bulk Waste

- NewGen does not recommend any changes to the City's current call-in bulk waste collection program. This method is efficient and on par with industry standards and the benchmark cities and provides the City access to a valuable service at a low cost.

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SECTION 1 INTRODUCTION

In August 2024, the City of Stillwater, Oklahoma (City) retained NewGen Strategies and Solutions, LLC (NewGen), to conduct a Solid Waste Assessment and Management Study (Study) for the City's solid waste utility (Utility). The Study includes a cost of service and rate design study (Section 2), as well as operational assessments of specific areas of the City's solid waste operation (Section 3).

The purpose of the cost of service portion of the Study is to determine the cost of providing solid waste services, equitably distribute the costs to the appropriate customer classes, and design rates to safeguard the financial integrity of the Utility, including meeting the Utility's minimum reserve requirements.

This section of the report describes the solid waste services provided by the City of Stillwater. For each of these services (also called service categories), NewGen identified the cost of providing each of these services (both capital costs, as well as operating costs) in Section 2.

1.1 Background

The City of Stillwater solid waste utility currently provides solid waste and recycling collection services to approximately 14,800 households; and additionally, services commercial refuse and recycling customers via rear-load and roll-off collection. The Utility also provides street sweeping services and operates a convenience collection center that accepts the same items as the curbside recycling service, as well as household hazardous waste (HHW), bulky waste, and putrescible waste. This report is laid out in the following sections:

- Section 1 – Introduction
- Section 2 – Cost of Service and Rate Design
- Section 3 – Operational Assessment and Evaluation of New Services

1.2 Section 2 – Cost of Service and Rate Design

1.2.1 Current Solid Waste Services and Rates

Solid waste services provided by the City include the following:

- Residential Cart Service (refuse and recycling)
- Commercial Rear-Load (refuse and recycling)
- Commercial Roll-Off (refuse and recycling)
- Street Sweeping Services
- Yard Waste Collection
- Bulk Waste Collection
- Convenience Collection Center

1.2.2 Residential Cart Service

Residential services provided by the City include weekly residential refuse and recycling cart collection serviced via fully automated and semi-automated collection vehicles. Refuse carts are offered in four sizes: 35-gallon, 48-gallon, 64-gallon, and 96-gallon capacity, with different monthly rates for each cart size. The current rate for residential services is detailed in Table 1-1.

**Table 1-1
Current Residential Rates**

	Rate
Inside City Limits	
35-gallon cart	\$15.93
48-gallon cart	\$17.24
64-gallon cart	\$18.56
96-gallon cart	\$21.20
House-Side 96-gallon	\$32.27
(2) 64-gallon carts	\$31.01
(2) 96-gallon carts	\$34.70
Outside City Limits	
35-gallon cart	\$34.24
64-gallon cart	\$35.54
96-gallon cart	\$38.19
(2) 96-gallon carts	\$51.69

As part of this monthly user fee, all residents receive:

- Once per week refuse (garbage) collection
- Once per week recycling collection
- Three times per month yard waste collection
- Once per month glass collection
- Drop-off at the convenience collection center
- Move-in cardboard removal
- Access to bulk item collection (additional fees apply)

1.2.3 Commercial Rear-Load Refuse

The City offers one to six times per week collection and disposal of refuse via rear-load containers in sizes ranging from two to four cubic yards of capacity. The current rates for this service are aggregated in the rate matrix in Table 1-2.

**Table 1-2
Current Commercial Rear-Load Rates**

Container Size (CY)	Collection Frequency (days per week)					
	1	2	3	4	5	6
2	\$42.97	\$85.94	\$128.98	\$171.90	\$214.87	\$257.97
3	\$64.22	\$128.46	\$192.69	\$256.93	\$321.15	\$385.37
4	\$85.94	\$171.90	\$257.97	\$343.78	\$429.73	\$515.91

The current monthly rear-load rates are based on the frequency of collection and size of the container. The rates increase based on the size of containers and the number of weekly collections, as shown in Table 1-2. For example, a customer with a two cubic yard container that is collected once per week is charged \$42.97, while a customer that has a four cubic yard container collected once per week is charged \$85.94.

1.2.4 Commercial Roll-Off Refuse

The City provides collection and disposal services for roll-off containers, ranging from 10 to 40 cubic yards (CY) in size. Roll-Off customers pay a delivery fee, a daily rental fee based on the size of the container they are renting, and a flat collection charge of \$330 per collection (or “pull”). The compactor customers pay based on the weight of the material in the compactor and currently pay \$46.91 per ton.

1.2.5 Street Sweeping Services

The City provides street sweeping services to approximately 19,500 customers for a monthly fee of \$2.33 per month. The customers that pay this fee are all single-family and multi-family residential customers, including those multi-family residents that pay the opt-out fee.

1.3 Section 3 – Operational Assessment and Evaluation of New Services

Section 3 includes a review of several operational areas and services offered by the City or through a private contractor, and the evaluation of potential new services. The topics addressed in this section include:

- Commercial Solid Waste Collection
- Convenience Collection Center
- Recycling Processing
- Bulk Waste Collection

Where appropriate, impacts from the analysis in Section 3 were incorporated into the cost of service study.

1.4 Project Approach

The goal of a cost of service and rate design study is to determine the solid waste fees required to adequately recover the costs of providing services. NewGen developed a series of key tasks that provided the foundation for the conduct of the Study. The methodology is discussed in Section 2 of this report. NewGen utilized the following sources of information regarding the City's current system and financial requirements.

1.4.1 Data Request

NewGen submitted a detailed data request to the City to collect historical and background information on operations and practices. The information requested included:

- Detailed Financial Reports and Budgets
- Solid Waste Policies and Ordinances
- Customer and Container Counts
- Personnel Rosters
- Solid Waste and Recycling Tonnage Reports
- Fleet Inventory Operating Costs

1.4.2 Field Observations

During the onsite visit for the kick-off meeting, NewGen staff conducted field observations of commercial rear-load dumpster collection around the City, bulk waste collection operations, and observed the convenience collection center on two separate days. Additionally, NewGen staff toured the landfill, Republic's recycling staging facility, as well as the downtown alleys where commercial collection is provided.

1.4.3 Project Meetings

NewGen held a kick-off meeting with City staff to initiate the Study. This meeting served as a forum to confirm the scope of services, discuss the data already collected, and finalize the solid waste and recycling service categories to be analyzed in the cost of service analysis. NewGen also held numerous meetings with the City staff throughout the course of the project to discuss, plan, and finalize the cost of service analysis, operational assessment, and evaluation of new services.

SECTION 2

COST OF SERVICE AND RATE DESIGN

This section describes the tasks involved in conducting the solid waste cost of service analysis. Before describing each of the tasks in detail, NewGen has provided a brief overview of the overall cost of service analysis methodology. This section of the report also quantifies the cost of service-based rates for solid waste services.

2.1 Methodology Overview

This overview provides the background necessary to understand how data compiled in each task provides the information required to determine the cost of service and fees required to recover the cost of service.

- **Development of the “Test Year”** – The first task in conducting the cost of service analysis is the development of an annual revenue requirement for a Test Year. The revenue requirement represents the total revenue that the solid waste operation will need to recover during a year to fund all expenses incurred in providing solid waste services. NewGen used the fiscal year (FY) 2025 budget as the basis for the Test Year and then worked with City staff to make adjustments that reflect a typical year.
- **Development of the Revenue Requirement Forecast** – After developing the revenue requirement for the Test Year, NewGen worked with City staff to project changes in costs due to inflation, salary increases, new equipment, new customers, and other factors. This resulted in the five-year revenue requirement forecast from FY 2026 – FY 2030.
- **Allocation of Costs to Service Categories** – NewGen worked with City staff to assign and allocate costs to the appropriate service categories. The service categories represent the primary solid waste services provided by the City and are listed in Section 2.3.
- **Allocation to Customer Classes** – NewGen grouped the service categories based on the customer classes that will recover each service categories’ costs. The customer classes include residential customers, commercial rear-load, commercial roll-off, and street sweeping.
- **Determination of Billing Units** – NewGen identified the appropriate billing units for each customer class. For example, the residential customer is charged per container (based on the size of the cart that is serviced), so the number of residential containers was utilized as the billing unit for this customer class.
- **Calculation of the Cost of Service** – NewGen distributed the costs for each customer class across the appropriate number of billing units to determine the cost of service for each customer class.
- **Rate Design** – NewGen determined the solid waste fees required to adequately recover the cost of providing services under two separate rate scenarios.

2.2 Development of the Revenue Requirement

2.2.1 Selection of the Test Year

In developing the Test Year revenue requirement for the City, NewGen used the FY 2025 adopted budget as the basis for the Test Year. NewGen compared the FY 2025 adopted budget to historical expenses for FY 2023 and FY 2024. Through this comparison and with input from City staff, NewGen made adjustments to ensure that the Test Year would reflect expenses that occur on a regular basis.

2.2.2 Development of the Revenue Requirement Forecast

In addition to developing the Test Year revenue requirement, NewGen forecasted the annual revenue requirement for FY 2025 through FY 2030. NewGen developed this forecast by projecting how costs would change over the years due to a variety of different inflation factors. The assumptions used to develop the five-year forecast include the annual inflation factors shown in Table 2-1. These factors were developed based on NewGen's experience in the conduct of financial forecasts, along with input from City staff.

Table 2-1
Inflation Factors

Inflation Factor	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Salaries	3.00%	3.00%	3.00%	3.00%	3.00%
Benefits	3.00%	3.00%	3.00%	3.00%	3.00%
Fuel	3.00%	3.00%	3.00%	3.00%	3.00%
Vehicle Maintenance	3.00%	3.00%	3.00%	3.00%	3.00%
Capital Projects	3.00%	3.00%	3.00%	3.00%	3.00%
General Maintenance	3.00%	3.00%	3.00%	3.00%	3.00%
General	2.23%	2.23%	2.23%	2.23%	2.23%
Residential Customer Growth	1.00%	1.00%	1.00%	1.00%	1.00%
Commercial Customer Growth	0.50%	0.50%	0.50%	0.50%	0.50%
General Fund Transfer	5.00%	5.00%	5.00%	5.00%	5.00%
Indirect Costs	5.00%	5.00%	5.00%	5.00%	5.00%
Tonnage Growth	1.25%	1.25%	1.25%	1.25%	1.25%
Equipment	3.00%	3.00%	3.00%	3.00%	3.00%
Contract CPI Increase	4.00%	4.00%	4.00%	4.00%	4.00%

2.2.3 Capital Replacement

The revenue requirement incorporates funding for vehicle replacements scheduled to occur during the FY 2026 – FY 2030 forecast using vehicle leases and cash funding. Table 2-2 lists the planned replacement of non-lease vehicles for the forecast period. Table 2-2 also includes the cost associated with repaving the parking lot at the solid waste operations building at an estimated cost of \$500,000 in FY 2026. NewGen worked with City staff to estimate the costs of these capital replacements.

Table 2-2
Projected Capital Projects

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Parking Lot	\$500,000	\$0	\$0	\$0	\$0
Street Sweeper	\$387,229	\$0	\$0	\$0	\$0
Pickup Trucks	\$42,436	\$43,709	\$45,020	\$46,731	\$47,762
Small Garbage Truck	\$0	\$109,273	\$0	\$0	\$0
Skid Steer	\$0	\$0	\$56,275	\$0	\$0
Grapple Truck	\$0	\$191,227	\$0	\$0	\$0
Total^{1,2}	\$929,665	\$344,209	\$101,296	\$46,731	\$47,762

1. NewGen assumes the planned FY 2025 purchase of the Street Sweeper is completed by the end of FY 2025. If not, this unit would also need to be replaced in FY 2026.

2. Any minor arithmetic deviation is due to rounding.

2.3 Revenue Requirement

Table 2-4 shows the revenue requirement for the five-year forecast. The detailed composition of the forecast is provided in Appendix, Schedule 1.

Table 2-3
Solid Waste Revenue Requirement

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Solid Waste Revenue Requirement	\$8,178,696	\$8,566,518	\$8,890,296	\$9,225,259	\$9,708,348

The City provides a wide variety of solid waste services to its customers. To determine the costs for each service, there is a need to allocate costs to service categories that represent the primary solid waste services provided. All service categories were determined through a detailed series of discussions with City staff and are shown below.

- Residential Collection
 - Refuse
 - Recycling
 - Yard Waste
 - Glass Recycling
 - Bulky Items
 - Container Maintenance & Delivery
- Commercial Rear-Load Collection
 - Rear-Load Refuse
 - Cardboard
 - Container Maintenance & Delivery
- Commercial Roll-Off
 - Refuse/Recycling
 - Container Maintenance
- Disposal
- Convenience Collection Center
- Street Sweeping
- Solid Waste Administration
- Events
- Recycling Processing

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Identification of the total costs for each service category was a critical step in determining adequate rates that reflect the cost of providing the various services. These costs were isolated by service category to fully recover the total revenue requirement by matching those customers that utilize the service with the actual cost for that service. Table 2-4 identifies the cost of providing each service for FY 2026 through FY 2030.

Table 2-4
Revenue Requirement by Service Category

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Residential Collection					
Refuse	\$1,420,497	\$1,492,766	\$1,517,580	\$1,543,085	\$1,623,468
Recycling	769,098	804,340	819,366	834,814	874,814
Yard Waste	154,454	158,671	163,024	167,517	173,421
Glass	92,834	95,019	97,266	99,575	103,214
Bulky Items	142,210	149,884	152,220	154,620	162,989
Container Maintenance & Delivery	95,597	98,235	100,947	103,736	106,602
Commercial Rear-Load Collection					
Rear-Load Refuse	\$1,450,232	\$1,479,106	\$1,508,776	\$1,539,266	\$1,606,270
Cardboard	93,505	95,238	97,021	98,853	103,583
Container Maintenance & Delivery	130,256	133,756	137,352	141,047	144,843
Commercial Roll-Off Collection					
Refuse/Recycling	\$389,422	\$397,160	\$404,488	\$412,014	\$430,946
Container Maintenance	12,374	12,700	13,036	13,380	13,733
Disposal	1,024,905	1,079,225	1,136,424	1,196,654	1,260,077
Recycling Processing	400,222	421,434	443,770	467,290	492,056
Convenience Collection Center	133,088	138,529	144,121	149,868	155,774
Street Sweeping	375,260	385,908	396,861	408,129	419,721
Solid Waste Administration¹	1,484,732	1,614,251	1,747,453	1,884,517	2,025,627
Events	10,010	10,297	10,592	10,896	11,209
Total Revenue Requirement²	\$8,178,696	\$8,566,518	\$8,890,296	\$9,225,259	\$9,708,348

1. Administrative costs are comprised of the following: the administration portion of the budget, interfund transfers, and equipment replacement reserve contributions.

2. Any minor arithmetic deviation is due to rounding.

2.4 Allocation to Customer Classes

After calculating the costs for each service category over the five-year period, NewGen allocated the costs for the various service categories to each respective customer class. This process identifies the appropriate customers to be charged for each service provided. Table 2-5 identifies how the service categories were grouped and the cost recovery basis for each service category.

Table 2-5
Recovery Basis for Service Categories

Service Category	Recovery Basis
Solid Waste Administration	Distributed to all customer classes based on revenue requirement
Residential Refuse Collection	
Refuse	Residential Collection
Recycling	Residential Collection
Yard Waste	Residential Collection
Glass Recycling	Residential Collection
Bulky Items	Residential Collection
Cart Maintenance & Delivery	Residential Collection
Commercial Rear-Load Collection	
Rear-Load Refuse	Rear-Load Collection
Cardboard	Rear-Load Collection
Container Maintenance & Delivery	Rear-Load Collection
Commercial Roll-Off Collection	
Refuse/Recycling	Roll-Off Collection/Residential Collection ¹
Container Maintenance	Roll-Off Collection
Disposal	Distributed to all customer classes based on tons disposed by each class
Convenience Collection Center	Residential Collection
Street Sweeping	Street Sweeping Operation
Events	Residential Collection
Recycling Processing	Residential collection, Rear-Load Collection, Roll-Off Collection

1. Residential is included in the recovery basis because of the roll offs utilized in the convenience collection center.

2.5 Determination of Billing Units

To calculate the appropriate rates, NewGen determined the number of annual billing units for the various customer classes. NewGen received billing data for each customer class from City staff and determined the cost of service by dividing the revenue requirement for each service category by the appropriate number of billing units. Billing unit forecasts were provided by City staff.

2.5.1 Residential Collection

The residential billing units for the five-year forecast are shown in Table 2-6. The customer growth projections shown in Table 2-6 assume annual growth of one percent, which is consistent with the growth the City has experienced for the last several years.

**Table 2-6
Residential Billing Units**

Cart	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Inside City Limits						
35-Gallon Refuse Carts	1,261	1,274	1,286	1,299	1,312	1,325
48-Gallon Refuse Carts	125	126	128	129	130	131
64-Gallon Refuse Carts	3,051	3,082	3,112	3,143	3,175	3,207
96-Gallon Refuse Carts	8,441	8,525	8,611	8,697	8,784	8,872
Extra Carts (64-Gallon)	48	48	49	49	50	50
Extra Carts (96-Gallon)	679	686	693	700	707	714
Outside City Limits						
35-Gallon Refuse Carts	37	37	38	38	39	39
64-Gallon Refuse Carts	176	178	180	181	183	185
96-Gallon Refuse Carts	888	897	906	915	924	933
Extra Carts (96-Gallon)	111	112	113	114	116	117
Total¹	14,817	14,965	15,115	15,266	15,419	15,573

1. Any minor arithmetic deviation is due to rounding.

2.5.2 Commercial Rear-Load Refuse

The City provides commercial rear-load customers with refuse and cardboard collection via dumpsters ranging in sizes from two cubic yards to four cubic yards and ranging in collection frequency from once per week to six times per week. The City bills the refuse customers a monthly fee based upon the size of the container collected, the frequency of collection, and the number of containers.¹ Therefore, the billing units for commercial collection consist of three components:

- **Number of Containers:** Used to recover administration and container maintenance costs.
- **Annual Collections:** Used to recover the cost of collection operations.
- **Annual Disposal Capacity:** Measured in cubic yards and used to recover disposal costs based on cubic yards (CY) of container capacity.

Table 2-7 shows the projected billing units for commercial rear-load customers that are located inside city limits. The projections were developed utilizing a 0.5% annual growth rate. The growth projections were provided by City staff.

**Table 2-7
Commercial Solid Waste Rear-Load Collection Billing Units Forecast (Inside City Limits)**

Billing Units	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Number of Containers	872	876	881	885	890	894
Annual Collections	100,880	101,384	101,891	102,401	102,913	103,427
Annual Disposal Capacity (CY)	286,208	287,639	289,077	290,523	291,975	293,435

¹ Cardboard dumpsters are collected for free.

The City also provides rear-load service to customers located outside City Limits as detailed below in Table 2-8.

Table 2-8
Commercial Solid Waste Rear-Load Collection Billing Units Forecast (Outside City Limits)

Billing Units	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Number of Containers	112	113	113	114	114	115
Annual Collections	6,812	6,846	6,880	6,915	6,949	6,984
Annual Disposal Capacity (CY)	19,864	19,963	20,063	20,163	20,264	20,366

Both the inside and outside city limits customers were used to determine the cost of service (Section 2).

2.5.3 Commercial Roll-Off

The City offers roll-off services for two different customer types, open-top roll-off and compactor roll-off. The City provides open-top roll-off customers with refuse collection via 20, 30, and 40 cubic yard roll-off containers. The City charges these customers based on a delivery fee, pull fee, and a monthly rental fee. Compactor roll-off customers provide their own containers and the City provides collection and disposal services. Compactor customers are currently charged only a per-ton fee based on the weight of the material in the compactor. The minimum fee is based on two tons. Recycling roll-offs are not currently charged.

Table 2-9 shows the projected billing units for commercial roll-off customers. This includes the pulls from the City's Convenience Collection Center.

Table 2-9
Commercial Roll-Off Collection Billing Units Forecast¹

Billing Units	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Citizens Collection Center	689	692	696	699	703	706
Cardboard	208	209	210	211	212	213
Charged Open-Top	223	224	225	226	227	229
Compactors	314	316	317	319	320	322
Total Annual Pulls	1,434	1,441	1,448	1,456	1,463	1,470

1. These pulls include the roll-offs pulled at the convenience collection center.

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2.5.4 Disposal

The City has an agreement with Republic to deliver the City's tonnage to the Republic's landfill. The projected annual tons that the City will send to the landfill, by customer class, are shown in Table 2-10.

Table 2-10
Disposal Tonnage Forecast

	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Residential Refuse	9,915	10,559	10,691	10,824	10,959	11,096
Commercial Refuse	11,058	11,196	11,336	11,477	11,621	11,766
Roll-Off Refuse	1,684	1,705	1,727	1,748	1,770	1,792
Drop-Off Refuse	408	413	419	424	429	434
Total Tons Disposed¹	23,065	23,873	24,172	24,474	24,780	25,089

1. Any minor arithmetic deviation is due to rounding.

2.5.5 Recycling

The City has an agreement with Republic to deliver the City's recycling tonnage to the Tulsa Recycling & Transfer (TRT) MRF located in Tulsa. The projected annual tons that the City will send to Republic, by customer class, are shown in Table 2-11.

Table 2-11
Recycling Tonnage Forecast

	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Convenience Collection Center	264	268	271	274	278	281
Commercial Recycling Collection	85	86	87	88	89	90
Residential Recycling Collection	1,360	1,377	1,394	1,411	1,429	1,447
Total Tons Recycled¹	1,709	1,731	1,752	1,774	1,796	1,819

1. Any minor arithmetic deviation is due to rounding.

2.6 Calculation of the Cost of Service

NewGen determined the cost of service for each of the solid waste services provided by the City. It is important to note that the cost of service-based rates are not necessarily the rates NewGen recommends be adopted by the City. In Section 2.10 of this report, NewGen provides its rate guidelines and recommendations based on the following factors: NewGen's cost of service analysis, the City's policies, and NewGen's solid waste rate experience.

2.6.1 Residential Collection

The total residential revenue requirement is shown in Table 2-12. A detailed examination of the residential revenue requirement in each year of the forecast, for each scenario, is provided in Appendix, Schedule 4.

The total residential revenue requirement includes:

- All direct costs identified in Table 2-5.
- A proportional share of the administration costs (based on the percentage of the total revenue requirement the direct costs represent).
- The residential disposal costs.

Table 2-12
Residential Revenue Requirement

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Direct Costs					
Refuse	\$1,420,497	\$1,492,766	\$1,517,580	\$1,543,085	\$1,623,468
Recycling	769,098	804,340	819,366	834,814	874,814
Yard Waste	154,454	158,671	163,024	167,517	173,421
Glass	92,834	95,019	97,266	99,575	103,214
Bulky Waste	142,210	149,884	152,220	154,620	162,989
Container Maintenance/Delivery	95,597	98,235	100,947	103,736	106,602
Events	10,010	10,297	10,592	10,896	11,209
Convenience Collection Center	133,088	138,529	144,121	149,868	155,774
Roll-Off Collection Services for CCC	247,454	255,238	263,629	272,242	286,633
Indirect Costs					
Administration	\$794,039	\$872,842	\$944,028	\$1,017,187	1,096,904
Disposal and Processing Costs					
Residential Refuse	\$453,293	\$477,317	\$502,615	\$529,254	557,304
Recycling	318,422	335,299	353,070	371,782	391,487
CCC – Recycling Processing	61,894	65,174	68,628	72,265	76,096
CCC – Disposal	17,748	18,689	19,680	20,723	21,821
Total Revenue Requirement¹	\$4,710,638	\$4,972,301	\$5,156,766	\$5,347,563	\$5,641,735

1. Any minor arithmetic deviation is due to rounding.

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Table 2-13 shows the monthly cost of service based on dividing the revenue requirement by the number of residential billing units from Table 2-6, and then by 12 months.

Table 2-13
Residential Cost of Service

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Direct Costs					
Refuse	\$8.04	\$8.37	\$8.42	\$8.48	\$8.83
Recycling	4.36	4.51	4.55	4.59	4.76
Yard Waste	0.87	0.89	0.90	0.92	0.94
Glass	0.53	0.53	0.54	0.55	0.56
Bulky Waste	0.81	0.84	0.85	0.85	0.89
Container Maintenance/Delivery	0.54	0.55	0.56	0.57	0.58
Events	0.06	0.06	0.06	0.06	0.06
Roll-Off Portion	1.40	1.43	1.46	1.50	1.56
Residential Collection Subtotal	\$16.60	\$17.18	\$17.35	\$17.51	\$18.19
Convenience Collection Center	\$0.75	\$0.78	\$0.80	\$0.82	\$0.85
Indirect Cost					
Administration	\$4.50	\$4.89	\$5.24	\$5.59	\$5.97
Disposal					
35-Gallon	\$1.91	\$1.99	\$2.08	\$2.17	\$2.26
48-Gallon	2.62	2.73	2.85	2.97	3.10
64-Gallon	3.49	3.64	3.80	3.96	4.13
96-Gallon	5.24	5.46	5.70	5.94	6.19
2 - 64-Gallon	6.99	7.28	7.59	7.92	8.26
2 - 96-Gallon	10.48	10.93	11.39	11.88	12.38
Monthly Cost of Service¹					
35-Gallon	\$23.77	\$24.84	\$25.46	\$26.09	\$27.26
48-Gallon	\$24.47	\$25.58	\$26.23	\$26.90	\$28.10
64-Gallon	\$25.35	\$26.49	\$27.18	\$27.89	\$29.13
96-Gallon	\$27.09	\$28.32	\$29.08	\$29.87	\$31.20
2 - 64-Gallon	\$28.84	\$30.14	\$30.98	\$31.85	\$33.26
2 - 96-Gallon	\$32.34	\$33.78	\$34.78	\$35.81	\$37.39

1. Any minor arithmetic deviation is due to rounding.

2.6.2 Commercial Rear-Load Collection

The City provides both refuse and recycling (cardboard only) commercial rear-load collection. The total rear-load refuse revenue requirement and cost of service is shown in Table 2-14. The total rear-load revenue requirement includes:

- All direct costs identified in Table 2-5.
- A proportional share of the administration costs (based on the percentage of the total revenue requirement the direct costs represent).
- The commercial rear-load disposal costs.

Table 2-14
Rear-Load Refuse Revenue Requirement & Cost of Service

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Collection Cost					
Refuse Collection	\$1,450,232	\$1,479,106	\$1,508,776	\$1,539,266	\$1,606,270
Container Cost					
Administration	\$445,374	\$477,577	\$517,115	\$557,811	\$598,103
Container Maintenance Cost	122,440	125,730	129,111	132,584	136,152
	\$567,814	\$603,307	\$646,226	\$690,394	\$734,255
Volume-Based Cost					
Commercial Refuse Disposal	\$480,647	\$506,121	\$532,945	\$561,191	\$590,934
Total Revenue Requirement¹	\$2,498,693	\$2,588,534	\$2,687,948	\$2,790,852	\$2,931,459
Billing Units					
Number of Containers	1,343	1,350	1,357	1,363	1,370
Number of Annual Collections	147,190	147,926	148,666	149,409	150,156
Number of Annual Capacity (CY)	438,488	440,680	442,883	445,098	447,323
Administrative and Container Cost ¹	\$35.23	\$37.24	\$39.70	\$42.20	\$44.65
Cost per Collection ¹	\$9.85	\$10.00	\$10.15	\$10.30	\$10.70
Disposal Cost per CY of Capacity ¹	\$1.10	\$1.15	\$1.20	\$1.26	\$1.32

1. Any minor arithmetic deviation is due to rounding.

To identify the monthly cost of service for refuse containers, the different component costs should be allocated as follows:

- Cost per Container: \$33.21 (in FY 2025) times the number of containers, PLUS
- Cost per Collection: \$9.00 (in FY 2025) times the number of collections per week, times 4.33 (weeks per month), PLUS
- Cost per Cubic Yard of Capacity: \$1.05 (in FY 2025) times the capacity of the container times the number of collections per week, times 4.33.

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The example below utilizes the components listed above to generate a monthly cost of service for a 2 CY container collected twice per week:

- Cost per Container: \$33.21 (in FY 2025) times 1, PLUS
- Cost per Collection: \$9.00 (in FY 2025) times twice per week, times 4.33, PLUS
- Cost per Cubic Yard of Capacity: \$1.05 (in FY 2025) times 2 CY times the number of collections per week, times 4.33.
- The sum of all the above yields a monthly cost of \$120.24 to serve a 2 CY container 2 times per week. This may deviate slightly from similar calculations in the model due to rounding.

Table 2-15 lists the projected cost of service for commercial cardboard customers for the five-year forecast, for both scenarios. Table 2-15 includes the cost for both rear-load and roll-off cardboard collection. The costs allocated to cardboard collection include:

- All direct costs identified in Table 2-5.
- A proportional share of the administration costs.
- Recycling processing fees.

Table 2-15
Commercial Cardboard Revenue Requirement

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Collection Cost					
Collection	\$93,505	\$95,238	\$97,021	\$98,853	\$103,583
Container Cost					
Container Maintenance/Delivery	\$7,815	\$8,025	\$8,241	\$8,463	\$8,691
Administration	\$26,349	\$28,201	\$30,478	\$32,816	\$35,379
Roll-Off Cardboard Collection	\$74,703	\$77,053	\$79,586	\$82,186	\$86,531
Commercial Cardboard Processing Cost	\$19,906	\$20,961	\$22,072	\$23,242	\$24,474
Total Revenue Requirement¹	\$222,278	\$229,478	\$237,398	\$245,560	\$258,657

1. Any minor arithmetic deviation is due to rounding.

2.6.3 Commercial Roll-Off

Table 2-16 lists the projected cost of service for commercial roll-off customers for the five-year forecast, for both scenarios. The cost of service includes:

- All direct costs identified in Table 2-5.
- A proportional share of the administration costs.
- Disposal costs for charged customers.

Table 2-16
Roll-Off Revenue Requirement

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Charged Customers					
Collection	\$389,422	\$397,160	\$404,488	\$412,014	\$430,946
Disposal	\$21,795	\$22,950	\$24,166	\$25,447	\$26,796
Total Charged Customers	\$101,885	\$105,560	\$109,492	\$113,560	\$119,567
Compactors					
Collection	\$112,773	\$116,321	\$120,144	\$124,070	\$130,628
Disposal	\$51,422	\$54,148	\$57,018	\$60,040	\$63,222
Total Compactors	\$164,195	\$170,468	\$177,162	\$184,109	\$193,850
Total Revenue Requirement^{1,2}	\$266,080	\$276,028	\$286,654	\$297,669	\$313,416

1. Any minor arithmetic deviation is due to rounding.

2. Includes collection and disposal

The cost of service for roll-off collection for the five-year forecast, for both scenarios, is shown in Table 2-17. The difference in the cost per pull between open-top and compactor roll-offs is the average disposal cost allocated to each category.

Table 2-17
Roll-Off Cost Per Pull Including Disposal

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Open-Top Cost Per Pull	\$454.61	\$468.66	\$483.70	\$499.18	\$522.97
Compactor Cost Per Pull	\$520.31	\$537.50	\$555.83	\$574.75	\$602.15

2.6.4 Disposal

The City entered into an agreement on February 25, 2022, with Republic Services of Stillwater, Inc. (Republic) to dispose of the City's waste at Republic's landfill. The current tipping fee the City is contractually obligated to pay is \$41.28 for MSW. NewGen calculated the cost per ton based on what the City is budgeting for disposal costs.

Table 2-18
Disposal Revenue Requirement & Cost of Service

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Direct Cost	\$1,024,905	\$1,079,225	\$1,136,424	\$1,196,654	\$1,260,077
MSW Tonnage					
Residential	10,559	10,691	10,924	10,959	11,096
Commercial	11,196	11,336	11,477	11,621	11,766

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Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Roll-Off	1,705	1,727	1,748	1,770	1,792
Convenience Collection Center	413	419	424	429	434
Total MSW Tonnage	23,873	24,172	24,474	24,780	25,089
Disposal Cost per Ton¹	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22

1. Any minor arithmetic deviation is due to rounding.

These disposal costs were then allocated to the appropriate customer classes as shown below in Table 2-19.

Table 2-19
Disposal Customer Class Allocations

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Disposal + Recycling Cost					
Residential (less CCC)	\$453,293	\$477,317	\$502,615	\$529,254	\$557,304
Commercial	480,647	506,121	532,945	561,191	590,934
Roll-Off	73,217	77,098	81,184	85,487	90,017
Convenience Collection Center – Disposal	17,748	18,689	19,680	20,723	21,821
Total MSW Tonnage	\$1,024,905	\$1,079,225	\$1,136,424	\$1,196,654	\$1,260,077

2.6.5 Recycling

The City currently sends its recyclable materials to Republic's landfill, where Republic then hauls the City's recyclables to TRT in Tulsa. The direct costs for recycling include three primary costs:

- Republic recycling staging facility - \$59.49 per ton.
- Republic hauling fee – Average \$57.87 per tons plus \$11.43 per ton for fuel costs.
- TRT recycling processing fee - \$82.11 per ton, plus an additional fee for contamination.

These fees total approximately \$222.38 per ton for FY 2025, including the contamination fee, increasing to \$231.27 in FY 2026.

Table 2-20
Processing Revenue Requirement

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Direct Cost	\$400,222	\$421,434	\$443,770	\$467,290	\$492,056
Total Revenue Requirement¹	\$400,222	\$421,434	\$443,770	\$467,290	\$492,056

1. Any minor arithmetic deviation is due to rounding.

Table 2-21
Processing Cost of Service

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Recycling Cost per Ton	\$231.27	\$240.52	\$250.14	\$260.15	\$270.55

2.6.6 Street Sweeping

Table 2-22 lists the projected cost of service for street sweeping customers for the five-year forecast. The cost of service includes:

- All direct costs identified in Table 2-5.
- A proportional share of the administration costs.

Table 2-22
Street Sweeping Revenue Requirement

Service Category	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Direct Cost					
Street Sweeping	\$375,260	\$385,908	\$396,861	\$408,129	\$419,721
Indirect Cost					
Administration	\$105,746	\$114,269	\$124,670	\$135,486	\$143,358
Total Revenue Requirement¹	\$481,007	\$500,177	\$521,531	\$543,615	\$563,080

1. Any minor arithmetic deviation is due to rounding.

The cost of service for street sweeping for the five-year forecast is shown in Table 2-23.

Table 2-23
Street Sweeping Cost of Service

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Monthly Cost per Customer	\$2.04	\$2.10	\$2.16	\$2.23	\$2.29

2.7 Revenue from Current Rates

Prior to considering any rate changes, it is beneficial to evaluate the revenue projected under the current rates for FY 2025 through FY 2030 to clarify the magnitude of the under-recovery if rates are not increased. Table 2-24 shows the forecasted revenue recovery from current rates, which is projected to cumulatively under-recover by approximately \$8,538,291 over the five-year forecast.

Based on this projected under-recovery, it is important that the City put in place a rate strategy that systematically addresses the City's primary solid waste user fee mechanisms. The following section provides NewGen's recommended approach regarding what rate increases should be made over the next five years, for all customer classes, to place the City on a path to secure financial sustainability.

Table 2-24
Revenue Sufficiency from Current Rates

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenue from Current Rates	\$7,213,677	\$7,276,772	\$7,340,459	\$7,404,744	\$7,469,631
Revenue Requirement	\$8,178,696	\$8,566,518	\$8,890,296	\$9,225,259	\$9,708,348
Over/(Under) Recovery	(\$965,019)	(\$1,289,746)	(\$1,549,837)	(\$1,820,515)	(\$2,238,716)
Cumulative Over/(Under) Recovery	(\$1,639,477)	(\$2,929,223)	(\$4,479,060)	(\$6,299,575)	(\$8,538,291)

Figure 2-1 shows the five-year forecast of revenue compared to revenue requirement for each of the customer classes and in total based on current rates. As also shown in Table 2-24, the revenue from current rates is not sufficient to recover the cost of service and several customer classes, residential in particular, significantly under-recover the cost of service.

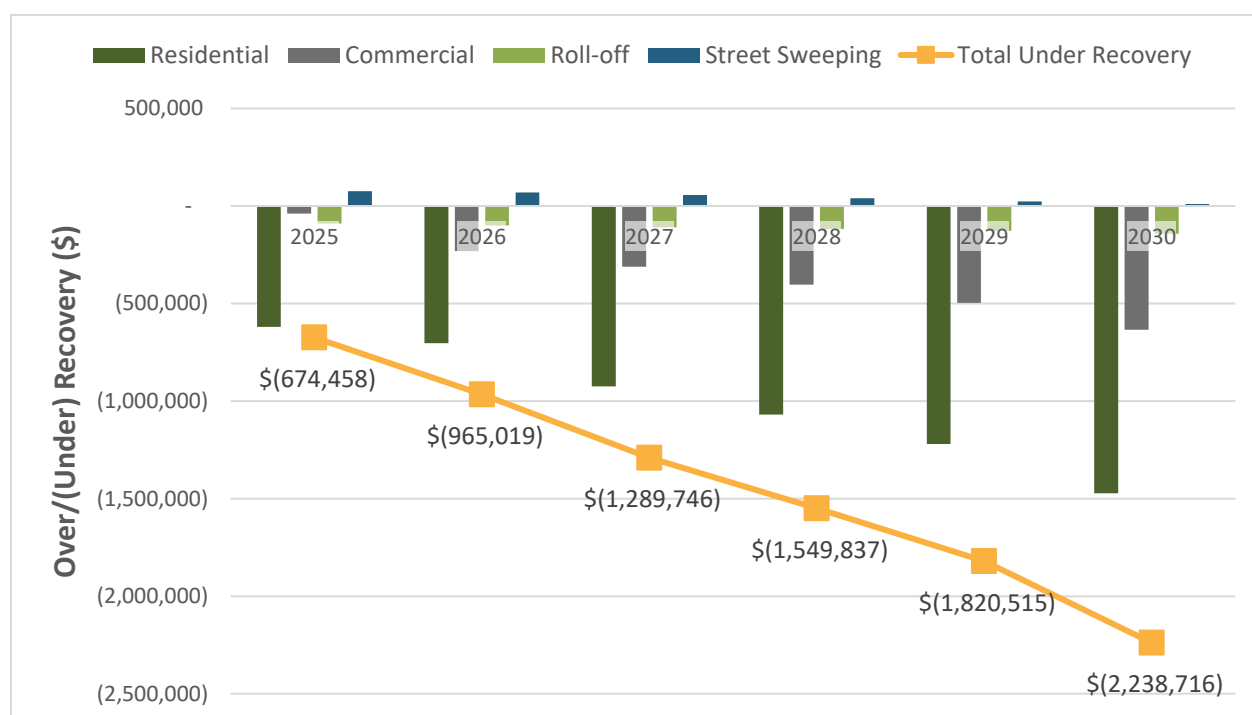


Figure 2-1 Revenue Sufficiency Forecast from Proposed Rates – Current Rates

2.8 Revenue Enhancement and Expense Reduction Opportunities

Before addressing rate recommendations, NewGen will outline opportunities recommended to either increase revenue or decrease expenses. These opportunities are primarily reflected in the “Scenario 2” rate recommendations discussed in Section 2.9. The following summarizes these opportunities, along with several rate structure changes that NewGen recommends the City implement.

2.8.1 Revise Roll-Off and Compactor Fee Structure

Currently, all open-top roll-off customers pay the same flat fee regardless of container size and the amount of material disposed. Conversely, compactor customers pay only a per-ton fee, but it is not sufficient to recover the City's collection costs. NewGen recommends the City implement a uniform cost per collection (or "per pull") for all open-top and compactor customers with an additional disposal fee that equals the per-ton disposal cost incurred by the City multiplied by the actual number of tons disposed. This rate structure change allows the City to better recover its cost while providing an equitable rate structure for all roll-off customers.

2.8.2 Revise Commercial Collection Fee Structure

The more collections per week the City provides a commercial customer, the more it costs the City. However, the City's current commercial dumpster rates do not reflect this additional effort. For example, a two cubic yard container collected four times per week has the same rate as a four cubic yard container collected twice per week. Even though the City provides eight cubic yards of service in both cases, the City incurs more cost to visit a customer four times per week. NewGen recommends shifting commercial rates to better align with the City's costs for providing service.

2.8.3 Commercial Recycling Fee

The City currently does not charge a fee for commercial recycling services. There is a fee in the current ordinance for recycling roll-off services, but it is not charged to customers. NewGen recommends the City implement the existing fee for roll-off recycling and implement a new fee for commercial dumpster recycling customers. NewGen recommends the City implement a rate that is 50% of the equivalent refuse rate.

2.8.4 Implement a Cardboard Baler

This option is discussed in more detail in Section 3.3. It would allow the City to increase revenue for clean, sorted cardboard while minimizing the cost for processing this material stream.

2.8.5 Transition Commercial Collection to Front-Load Dumpsters

This option is discussed in detail in Section 3.1. Currently, rear-load dumpsters are limited in size. Transitioning to front-load collection would allow the use of dumpsters with a capacity up to eight cubic yards and would increase collection efficiency by allowing commercial routes to use one person per route compared to two. Some areas of the City (e.g., downtown alleys) would continue to be collected with rear-load containers. Since this option requires a change in vehicle type, NewGen recommends aligning this change with the vehicle lease schedule. The analysis assumes the transitioned process would start in FY 2029 and continue into FY 2030.

2.8.6 Phase Out 35-Gallon Cart Size

The City currently offers three cart sizes (35-, 64-, and 96-gallon). There is an additional cost to the City of maintaining multiple cart sizes (e.g., maintaining inventory and spare parts for three cart sizes, administrative costs of switching out cart sizes, billing for different cart sizes, etc.). In addition, there can be some operational issues with collection of the smaller 35-gallon carts. They more easily fall over due

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to high winds or uneven surfaces and, at times, can fall into the collection vehicle because the automated arm does not squeeze the cart as tightly. The City previously discontinued issuing 48-gallon carts but allowed customers with those carts to return them. NewGen recommends the City follow a similar approach for 35-gallon carts. For the analysis, NewGen assumed that 10% of 35-gallon customers per year would trade in their carts for 64-gallon carts, which will generate additional revenue for the City.

Table 2-25 below demonstrates the additional revenue gained by the City assuming 10% of 35-gallon cart customers switch to 64-gallon carts each year.

Table 2-25
Additional Revenue Switching From 35-Gallon Carts to 64-Gallon Carts

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Additional Annual Revenue	\$9,373	\$15,336	\$21,891	\$29,296	\$37,282

2.9 Benchmarking

NewGen conducted benchmarking for a number of municipalities to compare residential and commercial rates. Figures 2-2 and 2-3 provide a benchmarking of residential and commercial rates, respectively, and Appendix B provides additional detail for each of these communities. This comparison shows that the City's rates are at or below the average, while still providing a high level of service. It is important to note that all solid waste and recycling collection providers are facing similar cost increases for equipment and personnel, and therefore, many communities are in the process of considering rate increases. The rates shown in these figures were current as of Spring 2025.

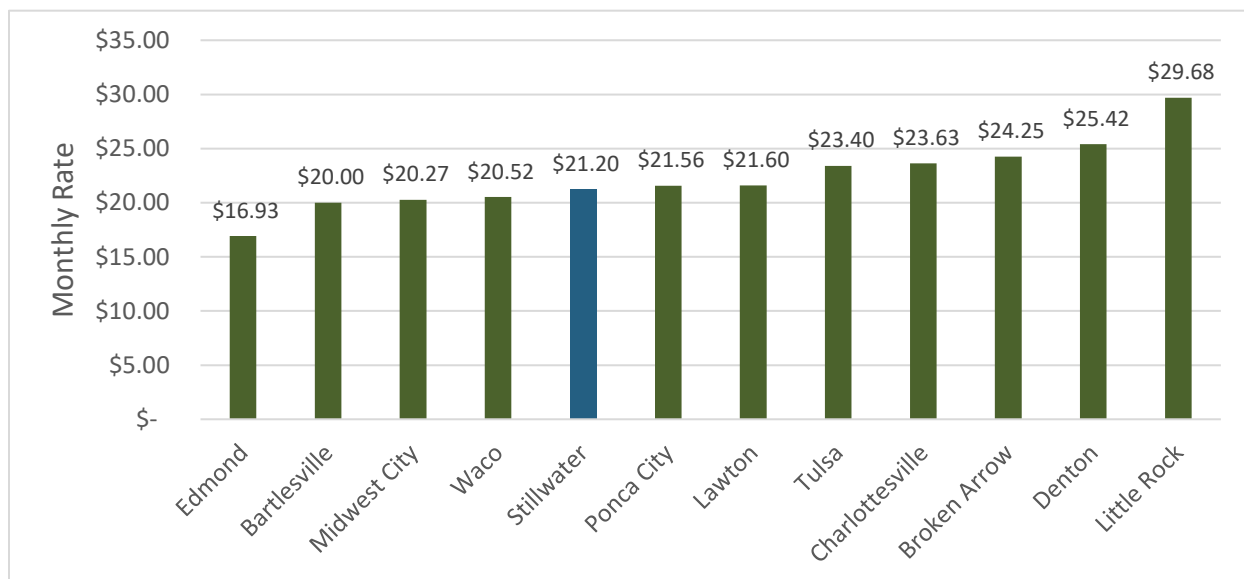


Figure 2-2 Residential Rate Benchmarking (Average Monthly Rate per 96-Gallon Container)



Figure 2-3 Commercial Rate Benchmarking (Average Monthly Rate per CY Collected)

2.10 Rate Recommendations

NewGen developed two alternative scenarios for the City. Scenario 1 reflects the current operation with no significant operational changes, but several rate structure changes (in addition to rate increases). Scenario 2 includes several revenue enhancement or expense reduction options that the City may consider implementing from Section 2.8. Table 2-26 summarizes the two scenarios forecasted by NewGen.

Table 2-26
Changes Included in Each Scenario

Changes Included	Scenario 1	Scenario 2
Residential Rate Increases	Yes	Yes
Revise Roll-Off and Compactor Fee Structure	Yes	Yes
Revise Commercial Dumpster Fee Structure	Yes	Yes
Utilize Existing Fee for Cardboard Roll-Offs	Yes	Yes
Implement Cardboard Baler	No	Yes
Implement Fee for Commercial Dumpster Recycling	No	Yes
Transition to Front-Load Dumpster Collection in FY 2029	No	Yes
Phase out 35-Gallon Cart Size	No	Yes

All rate increases discussed in this section would be effective on January 1 of the relevant fiscal year.

2.10.1 Residential Rates

NewGen would recommend the following residential rates increases for the two scenarios. The implementation of these proposed rates will ensure the overall financial integrity of the Utility through FY 2030.

Table 2-27
Proposed Residential Rate Increases

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Increase per HH per Month (Scenario 1)	9%	8%	7%	6%	5%
Increase per HH per Month (Scenario 2)	8%	8%	6%	6%	5%

Table 2-28 shows the impact of the residential rate increase for each scenario.

Table 2-28
Proposed Residential Rates

	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Scenario 1						
35-gallon cart	\$15.93	\$17.36	\$18.75	\$20.07	\$21.27	\$22.33
64-gallon cart	\$18.56	\$20.23	\$21.85	\$23.38	\$24.78	\$26.02
96-gallon cart	\$21.20	\$23.11	\$24.96	\$26.70	\$28.31	\$29.72
Scenario 2						
35-gallon cart	\$15.93	\$17.20	\$18.58	\$19.70	\$20.88	\$21.92
64-gallon cart	\$18.56	\$20.04	\$21.65	\$22.95	\$24.32	\$25.54
96-gallon cart	\$21.20	\$22.90	\$24.73	\$26.21	\$27.78	\$29.17

2.10.2 Commercial Rear-Load Rates

NewGen would recommend the following commercial rear-load rate increases for the two scenarios. Additionally, NewGen recommends changing the commercial rate structure to be more in line with the cost of service (see Section 2.8.2). For a detailed list of the rate recommendations, see Appendix, Schedules 6 and 9. Table 2-29 shows the average rate increase across all commercial customers, but it will vary depending on container size and collection frequency.

Table 2-29
Proposed Average Commercial Rear-Load Rates Increases

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Scenario 1	4.00%	4.67%	4.67%	4.78%	4.78%
Scenario 2	4.00%	4.67%	4.67%	4.11%	0.00%

2.10.3 Commercial Roll-Off Rates

NewGen would recommend that the City implement a different billing approach for roll-off customers in FY 2026. This approach would include a delivery fee, per per-pull fee, a monthly rental fee with a minimum of one pull per month, implementing a pull fee for compactors, and charging a disposal fee for all customers based on tonnage. NewGen recommends the roll-off fees detailed in Table 2-30 below in both scenarios.

**Table 2-30
Proposed Roll-Off Rates**

	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Delivery Fee – Inside City	\$100.00	\$104.00	\$108.16	\$112.49	\$116.99	\$121.67
Delivery Fee – Outside City	\$110.00	\$114.40	\$118.98	\$123.74	\$128.68	\$133.83
Monthly Rental fee – Inside City	\$100.00	\$104.00	\$108.16	\$112.49	\$116.99	\$121.67
Monthly Rental Fee – Outside City	\$110.00	\$114.40	\$118.98	\$123.74	\$128.68	\$133.83
Disposal Fee (per ton)	\$46.91	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22
Compactor Pull Fee	\$0	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Pull Fee – Inside City	\$330.00	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Pull Fee – Outside City	\$363.00	\$335.00	\$348.40	\$362.34	\$376.83	\$391.90

2.10.4 Commercial Recycling Rates

Currently, the City does not charge commercial recycling customers despite having a fee reserved in their ordinance for cardboard roll-offs. NewGen proposes setting a fee equal to 50% of the corresponding monthly fee for commercial dumpster customers and utilizing the \$210 per pull rate (already in the ordinance) for cardboard roll-offs.

**Table 2-31
Proposed Commercial Recycling Rates**

	Current	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Dumpster - 2 CY 1X Per Week	\$0	\$23.63	\$26.00	\$28.60	\$30.88	\$30.88
Dumpster - 4 CY 3X Per Week	\$0	\$128.99	\$128.99	\$128.99	\$128.99	\$128.99
Cardboard Roll-Off (per pull)	\$0	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00

2.10.5 Street Sweeping Rates

NewGen does not recommend any increases to street sweeping rates for the five-year forecast in either scenario.

2.10.6 Revenue Sufficiency from Proposed Rates

Table 2-32 shows the forecasted revenue recovery from the proposed rates under Scenario 1.

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Table 2-32
Revenue Sufficiency Forecast from Proposed Rates – Scenario 1

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenue from Proposed Rates	\$7,550,807	\$8,186,953	\$8,763,365	\$9,330,452	\$9,878,302
Revenue Requirement	\$8,178,696	\$8,566,518	\$8,890,296	\$9,225,259	\$9,708,348
Over/(Under) Recovery	(\$627,888)	(\$379,565)	(\$126,932)	\$105,193	\$169,954
Cumulative Over/(Under) Recovery	(\$1,302,347)	(\$1,681,912)	(\$1,808,844)	(\$1,703,650)	(\$1,533,696)

Figure 2-4 shows the five-year forecast of revenue compared to the revenue requirement for each of the customer classes and in total for Scenario 1.

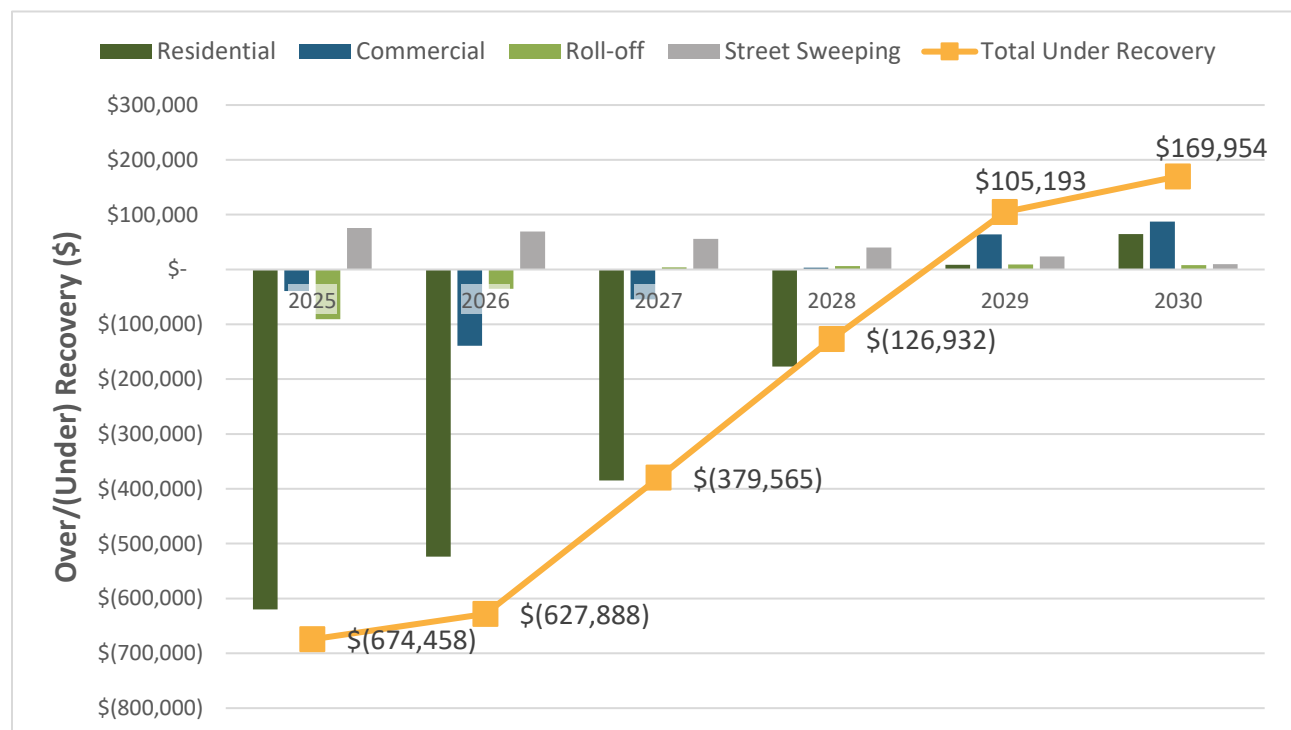


Figure 2-4 Revenue Sufficiency Forecast from Proposed Rates – Scenario 1

Table 2-33 shows the forecasted revenue recovery from the proposed rates under Scenario 2.

Table 2-33
Revenue Sufficiency from Proposed Rates – Scenario 2

	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Revenue from Proposed Rates	\$7,611,779	\$8,235,314	\$8,788,923	\$9,487,058	\$10,141,606
Revenue Requirement	\$8,178,696	\$8,566,518	\$8,890,296	\$9,425,259	\$9,808,348
Over/(Under) Recovery	(\$566,917)	(\$331,204)	(\$101,373)	\$61,799	\$333,258
Cumulative Over/(Under) Recovery	(\$1,241,375)	(\$1,572,579)	(\$1,673,952)	(\$1,612,153)	(\$1,278,895)

Figure 2-5 shows the five-year forecast of revenue compared to revenue requirement for each of the customer classes and in total for Scenario 2.

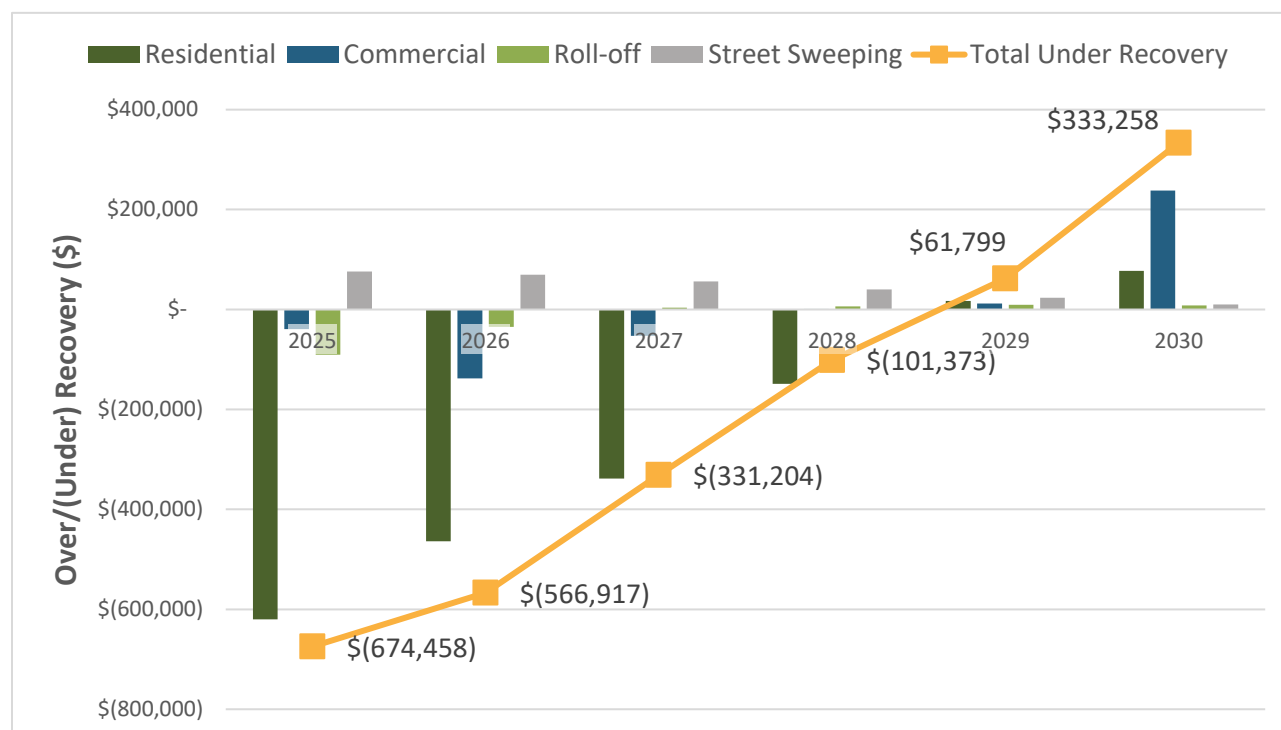


Figure 2-5 Revenue Sufficiency Forecast from Proposed Rates – Scenario 1

While the cumulative under recovery is still negative for both scenarios, the City is moving from an annual deficit to an annual surplus over the five-year forecast. The City's reserve funds (Section 2.11) allow the City to implement these changes over the five-year forecast period.

2.11 Reserves

NewGen estimated the impact each of the two scenarios will have on the City's reserves. The following tables show the forecasted reserve balances over the five-year forecast. For more detail, see Appendix, Schedule 8 and Schedule 11. Tables 2-34 and 2-35 include FY 2025 and estimate the impact on the reserve through June 30, 2025. To the extent the actual ending reserve is more or less than shown in these tables, the beginning balance for FY 2026 can be adjusted, which will then impact the remaining reserve forecast.

For both scenarios, the year-end fund balance exceeds the minimum balance of \$1 million in all years. While the fund balance nears the minimum at the end of FY 2028, the City would be able to add to the fund balance in FY 2029 and FY 2030.

Table 2-34
Reserve Balance Forecast – Scenario 1

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance	\$2,746,708	\$1,872,250	\$544,361	\$139,796	\$12,864	\$118,058
Additions:						
Capital Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Reductions:						
Parking Lot	\$0	(\$500,000)	\$0	\$0	\$0	\$0
Capital Replacement	(\$200,000)	(\$200,000)	(\$25,000)	\$0	\$0	\$0
Over/(Under) Recovery of Rates	(\$674,458)	(\$627,888)	(\$379,565)	(\$126,932)	\$105,193	\$169,954
Ending Balance	\$1,872,250	\$544,361	\$139,796	\$12,864	\$118,058	\$288,012
Operating Reserve	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Total Fund Balance	\$2,872,250	\$1,544,361	\$1,139,796	\$1,012,864	\$1,118,058	\$1,288,012

Table 2-35
Reserve Balance Forecast – Scenario 2

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Beginning Balance	\$2,746,708	\$1,872,250	\$605,333	\$249,129	\$147,756	\$209,555
Additions:						
Capital Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Reductions:						
Parking Lot	\$0	(\$500,000)	\$0	\$0	\$0	\$0
Capital Replacement	(\$200,000)	(\$200,000)	(\$25,000)	\$0	\$0	\$0
Over/(Under) Recovery of Rates	(\$674,458)	(\$566,917)	(\$331,204)	(\$101,373)	\$61,799	\$333,258
Ending Balance	\$1,872,250	\$605,333	\$249,129	\$147,756	\$209,555	\$542,813
Operating Reserve	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Total Fund Balance	\$2,872,250	\$1,605,333	\$1,249,129	\$1,147,756	\$1,209,555	\$1,542,813

2.12 Key Findings

Based on the analysis presented in this section, below are the key findings from the cost of service study:

- Residential, commercial, and roll-off rates have not kept pace with rising costs.
- Residential service significantly under-recovers the cost of service. Rate increases and rate structure changes are needed to maintain a positive fund balance.
- Implementing the recommended operational improvements reduces the rate increases needed for residential and commercial customers.
- The rates for the City of Stillwater are comparable to the benchmarks, and other cities are facing the same upward pressure on rates.

SECTION 3

OPERATIONAL ASSESSMENT AND EVALUATION OF NEW SERVICES

Section 3 includes a review of several operational areas and services offered by the City or through a private contractor, and the evaluation of potential new services. The topics addressed in this section include:

- Commercial Solid Waste Collection
- Convenience Collection Center
- Recycling Processing
- Bulk Waste Collection

In addition to reviewing data provided by the City for all operations discussed in this section, three members of the NewGen Project Team conducted field observations and in-person interviews for three days (October 15-17, 2025).

3.1 Commercial Solid Waste Collection Service

The City currently provides commercial collection with rear-load dumpsters. These dumpsters are collected with rear-load collection vehicles and require two personnel per vehicle - one driver and one collector, who helps maneuver and tip the rear-load dumpster into the rear-load vehicle using a hydraulically-actuated lifter. The City could transition to front-load dumpsters for most of the City. Certain areas of the City (e.g., alleys in the downtown area) would still require the use of the rear-load containers. Transitioning to front-load containers would also require a change in the collection vehicles used to collect them. The City would need to purchase front-load collection vehicles. Each front-load collection vehicle can be operated with one driver and no additional personnel.

The remainder of this section includes an evaluation of the operational and capital resources needed to transition to a front-load collection system and the resulting financial impact. This alternate collection scenario is referred to throughout this section as the “Alternate Scenario.”

3.2 Commercial Solid Waste Route Metrics

The route metrics for the current system are based on actual data received from the City and/or based on a prior collection analysis completed by NewGen. The route metrics for the Alternative Scenario are based on assumptions made using commonly accepted metrics for front-load commercial collection systems. As shown in Table 3-1, the City could complete commercial solid waste collection services with fewer than the current four routes by moving to front-load vehicles. The Alternative Scenario could be conducted with a total of three routes. Note that in the Alternative Scenario, the City would likely need to continue using one rear-load vehicle to collect dumpsters where front-load collection is not possible.

Table 3-1
Commercial Solid Waste Route Metrics

	Current System Rear-Load	Alternative Front-Load	Alternative Rear-Load
Number of Routes per Day	4	2	0.75 ¹
Trips to Landfill per Route	1	2	1
Dumpster Counts ²	1,235	988	245
Dumpster Lifts per Week ³	2,745	1,370	545
Dumpster Metrics			
Pounds per Dumpster ⁴	144	235	144
Time Metrics			
Average On-Route Time (Hrs.) ⁵	6.17	4.42	4.04
Turn-around Time at Facility (Hrs.) ⁶	0.58	1.17	0.58
Average Time Off Route, not at Landfill (Hrs.) ⁷	1.25	1.25	1.25
Total Route Time (Hrs.)⁸	8.5	8.5	6.38
Calculated Dumpster Count Data			
Dumpsters per Hour per Route	22	31	27
Average Dumpsters per Route	137	137	109
Total Dumpsters per Day (all routes)	549	274	82

1. The analysis assumes that the rear-loader would not be needed the entire collection day and could be utilized 25%, on average, to support other operations, such as cart collection for refuse or recycling.
2. Total dumpster counts in the Current Case is 1,235. NewGen assumed that up to 20% would remain rear-load and the remainder would be transitioned to front-load. This analysis assumes that customers with higher collection frequencies would move to a larger container collected fewer times per week.
3. Dumpster lifts refers to the number of times the dumpster is collected. In the Current Case, the dumpster lifts averages approximately 2.22 lifts per week; in the Alternative Scenario, front-load dumpsters can be larger and require fewer collections per week, and is assumed at 1.39 lifts per week based on NewGen's operational experience.
4. For the Alternative Scenario Front-Load collection, the pounds per dumpster have been increased to account for larger dumpster sizes collected less frequently by apportioning the total pounds collected in the current system by the number of lifts estimated for front load, minus the dumpsters that would remain rear load.
5. Average on-route time consists of time spent on the route collecting solid waste.
6. Turn-around time at the facility consists of the time it takes to arrive at the landfill, cross the scales, dispose of the load, and leave the landfill. It takes into consideration the number of trips to the landfill.
7. Average time off-route consists of pre- and post-trip inspections, lunch and breaks, travel time to and from the route, and travel time to and from the landfill.
8. Includes 0.5 hour paid lunch break.

3.2.1 Commercial Solid Waste Labor Metrics

The labor metrics for the current system are based on actual data received from the City. The labor metrics for the front-load scenario are based on assumptions made using commonly accepted metrics for front-load commercial collection systems. As shown in Table 3-2, the front-load scenario would only require one driver per route and would require one less total routes. (One rear-load route would need to remain in the system, still using one driver and one collector.) The number of supervisors and their salary and benefits would remain the same in each scenario.

Table 3-2
Commercial Solid Waste Labor Metrics

	Current System Rear-Load	Alternative Front-Load	Alternative Rear-Load
Number of Drivers ¹	4.6	2	0.75
Number of Collectors/Helpers ¹	4.6	2.3	0.86
Number of Supervisors	1	0.5	0.5
Average Annual Salary and Benefits per Employee			
Drivers ²	\$77,470	\$77,470	\$77,470
Collectors/Helpers	\$64,440	NA	\$60,000
Supervisors ³	\$88,610	\$88,610	\$88,610
Labor-related Incidentals per Employee ⁴	\$1,100	\$1,100	\$1,100
Total Estimated Labor-Related Expenses	\$752,600	\$225,600	\$169,100

1. Number of drivers and collectors is based on having 15% additional staff as backup for sick, vacation, and other time missed. Partial staff numbers assume staff will be shared with other solid waste collection operations.
2. Average annual salary with benefits for drivers is calculated from City-provided data of hourly rates.
3. Average annual salary with benefits for supervisors is calculated from City-provided data of hourly rates with benefits.
4. Incidentals include the cost of uniforms, safety equipment, etc.

As shown in Table 3-2, the total estimated annual labor expenses would be approximately \$357,900 less expensive in the Alternative Scenario, compared to the current system because of a reduced need for the number of drivers with one less route and no longer needing two crew per route for the front-load routes.

3.2.2 Commercial Operational Metrics

The operational metrics for the current system are based on actual data received from the City. The operational metrics for the rebalancing scenarios are based on assumptions made using commonly accepted metrics for front-load commercial collection systems. Because moving to front-load vehicles would mean the collection would occur with one less vehicle, the average miles per route would increase from the current 44 miles per route to an estimated 65 miles per route for the two front-load routes and one rear-load route. Maintenance per vehicle was increased for front-load vehicles compared to rear-load vehicles. Fuel economy per vehicle is assumed to remain the same.

Table 3-3
Commercial Solid Waste Operational Metrics

	Current System Rear-Load	Alternative Front-Load	Alternative Rear-Load
Average Miles per Route ¹	44.4	65.1	65.1
Average Fuel Economy	2.6 MPG	2.6 MPG	2.6 MPG
Number of Vehicles	5	3	1.25
Primary	4	2	0.75
Spare ²	1	1	0.5

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	Current System Rear-Load	Alternative Front-Load	Alternative Rear-Load
Expenses per Vehicle			
Maintenance & Repair (\$/Vehicle)	\$12,000	\$15,000	\$12,000
Total Estimated Annual Operating Expenses³	\$108,800	\$80,800	\$28,400

1. Estimated miles per route for the Alternative Scenario is based on two front-load vehicles covering the same ground as four rear-load vehicles were covering in the Current System, with a ten percent increase to be conservative. The same miles per route were assumed for the Alternative Scenario rear-load route.
2. NewGen assumed the back-up for the rear-load vehicle would be shared with other rear-load operations in the City.
3. Includes maintenance, fuel and insurance expenses.

As shown in Table 3-3, the total estimated annual operating expenses would be similar in the Alternative Scenario, compared to the current system because of higher maintenance cost per front-load vehicle and higher route miles traveled, increasing fuel costs.

3.2.3 Commercial Solid Waste Capital Cost Metrics

The capital cost metrics for the current system are based on actual data received from the City and/or research conducted by NewGen. The capital cost metrics for the Alternative Scenario is based on assumptions made using commonly accepted metrics for front-load commercial collection systems.

Table 3-4 shows the average cost for non-compacted front-load containers, the average of which is used to estimate the cost of dumpsters for the City in the Alternative Scenario.

Table 3-4
Commercial Front-Load Dumpster Cost (Non-compacted)

Container Size	Container Unit Cost
2 cubic yard	\$ 447
4 cubic yard	\$ 594
6 cubic yard	\$ 735
8 cubic yard	\$ 875

As shown in Table 3-5, the cost per vehicle is higher for front-load vehicles versus rear-load vehicles.

Table 3-5
Commercial Solid Waste Capital Cost Metrics

	Current System Rear-Load	Alternative Front-Load	Alternative Rear-Load
Vehicle Cost per Vehicle	\$305,000	\$425,000	\$305,000
Number of Vehicles	5	3	2
Primary	4	2	1
Spare	1	1	1
Dumpster Cost per Dumpster ¹	\$596	\$619	\$596
Dumpster Counts ²	1,235	998	245
Total Annualized Capital Cost^{3, 4}	\$378,600	\$316,100	\$90,900

1. Cost per dumpster is based on an average cost for multiple sizes.
2. Even though the City has existing rear-load dumpsters, the dumpsters have a finite life and must be repaired and replaced over time. The analysis assumes an annualized cost for dumpsters for both scenarios. For the current system these containers would be replaced over a period of time. For the Alternate Scenario, the containers would be purchased up-front since 80% of the rear-load containers would be replaced with front-load containers.
3. Five-year straight amortization used for vehicle capital costs.
4. Ten-year straight amortization used for front-load dumpster costs.

As shown in Table 3-5, the total estimated annual capital cost for vehicles and dumpsters would be \$28,400 more expensive in the Alternative Scenario compared to the current system with the amortized cost of front-load vehicles and front-load dumpsters.

3.2.4 Summary of Estimated Financial Impacts for Commercial Solid Waste Service

As shown in Table 3-6 and Figure 3-1, taking into consideration the estimated labor, operating, and capital expenses, the City's Current System costs approximately \$1,240,000 annually and the Alternative Scenario would cost approximately \$910,900 to operate two front-load routes and one rear-load route for a potential savings of approximately \$329,100 annually with the Alternative Scenario collection system.

Table 3-6
Commercial Summary of Estimated Financial Impacts

	Current System Rear-Load	Alternative Front-Load	Alternative Rear-Load
Annual Total Labor Costs	\$752,600	\$225,600	\$169,100
Annual Total Vehicle Operating Costs	\$108,800	\$80,800	\$28,400
Total Labor and Operating Costs	\$861,400	\$306,400	\$197,500
Annual Total Vehicle Capital Costs ¹	\$305,000	\$255,000	\$76,300
Annual Total Dumpster Capital Costs ²	\$73,568	\$61,144	\$14,600
Total Annual Estimated Collection Costs¹	\$1,240,000	\$622,500	\$288,400

1. Five-year straight amortization used for vehicle capital costs.
2. Ten-year straight amortization used for dumpster capital costs.

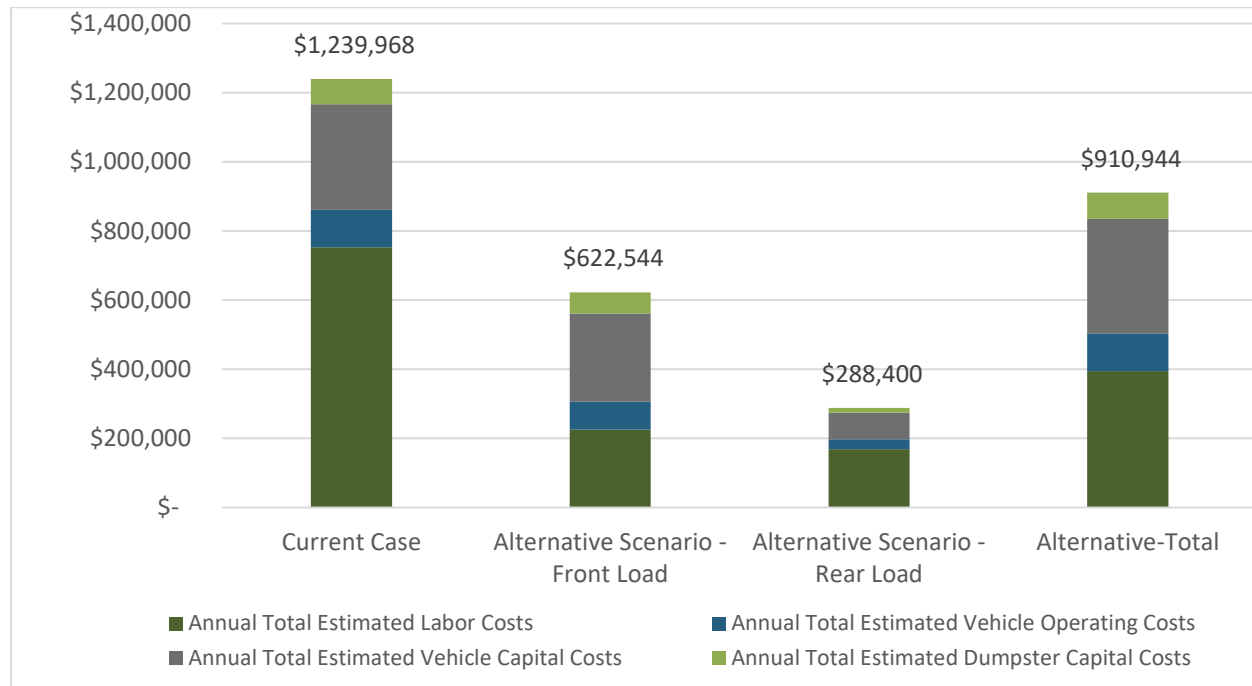


Figure 3-1 Commercial Solid Waste Summary of Estimated Financial Impacts

3.2.5 Additional Commercial Collection Customers

Because the City currently is only able to provide rear-load service to commercial customers, the City is limited on which commercial customers can be served. A switch to providing front-load commercial collection service may provide opportunity for the City to expand its customer base and better compete with the private sector that currently provides front-load service to commercial customers. NewGen believes the City would have capacity to add up to 10% more customers without adding an additional front-load vehicle. Beyond that amount the City would need to add another front-load vehicle (and driver). If an additional vehicle and driver were added, the City would need to increase customers by approximately 25% to better utilize the additional resources.

By increasing customers by 10% with the current resources, NewGen estimates the City could generate an additional \$185,000 in net revenue, in addition to the cost savings achieved from transitioning from rear-load to front-load collection.

3.2.6 Implementation

As Table 3-1 shows, implementing front-load collection would require the City to collect nearly 1,000 rear-load dumpsters from customers and replace those with front-load dumpsters. While this process should be well planned and coordinated, the effort and costs associated with the transition will be repaid to the City in the form of lower costs after implementation. The distribution of new containers can be contracted to a third party to ease the burden on the City, but the City should take an active role in engaging with its customer base to educate them on the change and have them select their desired container size. Scenario 2 of the cost of service analysis included the financial benefit of implementing front-load collection but also included up to \$175,000 of one-time implementation costs to be used for customer education, dumpster distribution, and other one-time costs. In addition, NewGen accounted for the

addition of a container delivery truck since its existing one can only deliver rear-load containers. Starting in FY 2027, the City should start to develop an implementation plan that, at a minimum, considers the following topics:

- Purchase and delivery of front-load collection vehicles
- Purchase and distribution of front-load containers
- Collection and recycling of rear-load containers
- Customer communication plan
- Guidance document to help customers decide which container size and frequency to choose
- Rates for front-load container service (front-load offers additional container sizes compared to rear-load)
- Staffing plan for new hires and training
- Phasing plan for implementing front-load service over the preferred time period

3.3 Convenience Collection Center

The City operates its Convenience Collection Center (Center), shown below in Figure 3-2, at 807 S. Perkins Road. The Center accepts non-hazardous recyclable items, household garbage and yard waste. Residents may also purchase and drop off Pay-As-You-Throw bags at the center. The hours of operation are Tuesday – Friday from 10 a.m. to 6 p.m. and Saturday from 8 a.m. to 4 p.m.

NewGen visited the Center on two separate days (October 15-16, 2024) during the field observation period to evaluate customer traffic during both morning and afternoon hours. NewGen evaluated aspects of the operations, including personnel, equipment, site layout, and customer traffic flow.



Figure 3-2 City of Stillwater Convenience Collection Center

Section 3

3.3.1 Materials Accepted

Table 3-7 below details the tonnages accepted at the Center, by material type, in FY 2024. The City accepts additional materials, included in Table 3-8, that are not tracked by weight.

Table 3-7
FY 2024 Tonnage Accepted Per Material

Material	FY 2024 Tons
Refuse	408
Aluminum	11
Batteries	4
Glass	0
Yard Waste	479
Metal	99
Cardboard	146
Paper/Plastic	119
Wood Waste	0
Tin Cans	9

Table 3-8 shows the current fee schedule for the Center.

Table 3-8
Rates of Accepted Materials

	Fee
Solid Recyclables ¹	No Fee
Liquid Recyclables ²	No Fee
Yard Waste ³	No Fee
Automotive Tires	No Fee
Refuse Containers up to 35 Gallons	\$1.50
Large Furniture Items	\$15.00
Small Furniture Items	\$5.00
Fluorescent Bulbs	\$0.25
Electronic Equipment	\$5.00
All TV's and Monitors	\$25.00
Appliances (Freon free) ⁴	No Fee
Water Based Paint (Per Gallon)	\$2.00
Latex Based Paint (Per Gallon)	\$1.40
Motor oil (Per Gallon)	\$0.20

1. Paper, cardboard, metal cans, plastic bottles
2. Used cooking oils, antifreeze
3. Requires current City of Stillwater Utility Bill and ID
4. Refrigerators, Washers, Dryers, Water Heaters

While the Center generates revenues from the fees charged, the revenue is not sufficient to cover the total expenses for operating the Center. The remaining expenses after revenues generated at the Center are recovered from residential rates (see Table 2-12).

3.3.2 Cardboard Collection

The Center currently collects clean, source-separated cardboard. The material is then hauled to the recycling staging facility located at the landfill (discussed in more detail in Section 3.5) and combined with other recyclables. These mixed recyclables are then hauled to the TRT MRF, where they are separated into marketable commodities, including cardboard. NewGen believes the City could benefit from baling the clean cardboard and selling it directly, rather than mixing it with other recyclables.

The City collected approximately 231 tons of cardboard between the Center and the commercial cardboard collection route. NewGen recommends investing in a cardboard baler to not only avoid the fees associated with hauling the material to Tulsa and sorting it, but also to generate revenue through the sales of baled cardboard. Table 3-9 below contains an analysis of the benefits of this investment. NewGen believes the City could benefit approximately \$67,600 per year from the combination of additional revenue and avoided costs from installing and operating a baler for its clean, sorted cardboard.

**Table 3-9
Cardboard Baler Analysis**

	Annual Cost
Annualized Revenue	
Sale of CCC Baled Cardboard	\$11,205
Sale of Commercial Baled Cardboard	\$6,542
Total Revenue	\$17,746
Hauling and Processing Cost Savings ¹	
Tons from Collection Center	\$34,906
Tons from Commercial Collection	\$19,906
Total Cost Savings	\$54,002
Baler Costs	
Annualized Baler Costs and Site Improvements ³	\$3,000
Annual Maintenance	\$1,182
Total Annual Baler Costs	\$4,182
Total Revenue and Cost Savings Net of Costs	\$67,566

1. Cost per total annual tons from each customer type.

2. Baler Costs and Site Improvements estimated at \$30,000 have been annualized over a 10-year period.

3.3.3 Convenience Collection Center Key Findings

Overall, NewGen found the Convenience Collection Center to be a well-maintained and efficient operation. While the location is convenient for residents, it does present space limitations on busier days, especially Saturdays. Since there is little room to queue at the entrance to the facility, the queue can extend onto S. Perkins Road.

Section 3

The addition of a baler does not directly improve the operations of the Center. However, leveraging the Center to generate the additional revenue and cost savings is a benefit to the City.

3.4 Recycling Processing

The City contracts with Republic for aggregating single-stream recyclables at a recycling staging facility located at Republic's landfill. Republic then hauls the recyclable materials to the TRT facility in Tulsa, as discussed in Section 3.4. Each ton of single-stream recycling collected in the City incurs the following fees:

- Republic recycling staging facility - \$59.49 per ton
- Republic hauling fee – Average \$57.87 per ton plus \$11.43 per ton for fuel costs
- TRT recycling processing fee - \$82.11 per ton, plus an additional fee for contamination

These fees total approximately \$222.38 per ton for FY 2025, including the contamination fee. Given the cost per ton to recycle the material, NewGen observed the operations at Republic's recycling staging facility to evaluate any potential opportunities for increasing the efficiency of the operation or reducing costs.

Figure 3-3 provides an overview of Republic's recycling facility which is a covered tipping floor. Material unloaded from the City's vehicles are pushed with a wheel loader into a compactor. When the compactor container is full, it is swapped for an empty container, and the full container is hauled to the TRT facility.



Figure 3-3 Republic's Recycling Staging Facility

Overall, the facility has relatively minimal operations, which presents few options to increase efficiency or reduce costs. Republic could consider the use of a tandem trailer to haul two compactor containers at a time to the TRT facility, but NewGen does not believe there would be a significant cost savings.

To provide a basis of comparison, NewGen developed an estimate of what it would cost the City to provide this service, instead of utilizing a private company. This analysis and its assumptions are detailed below in Table 3-10.

Table 3-10
Recycling Staging Facility Analysis

	Annual Cost
Capital and O&M Costs	
Annual Facility and Site Cost ¹	\$64,752
Total Amortized Equipment Costs ^{2,3}	\$26,924
Total Facility Labor Costs ⁴	\$64,173
Total Capital and O&M Costs	\$155,849
 Total Annual Recycling Tonnage ⁵	 1,564
Total Cost per Ton	\$99.68
1. Facility site and infrastructure cost assumed to be \$500,000 and is financed at a 10-year note with 5% interest. 2. Equipment purchased includes a wheel loader, a stationary compactor, and a 30 CY receiving unit for the compactor, also includes estimated annual O&M expenses. 3. Equipment to be amortized over a 10-year life span. 4. Includes salary and benefits of one additional employee. 5. Excludes cardboard tons that could be baled by the City.	

Based on this analysis, it would cost the City more to build and operate its own recycling staging facility based on current tonnage. However, if recycling volumes increase, the cost per ton for the facility would decrease. A City-owned facility could then become a more viable option if tonnages increase over time.

3.5 Bulk Waste

The City currently operates bulk waste collection on a call-in basis. The City typically uses a roll-off truck equipped with a grapple unit operated by one staff member. The staff member drives to the bulk collection locations, exits the vehicle, and operates the knuckle boom to place the waste into the bed of the roll-off truck. Then, they return to the vehicle to proceed to the next stop. The City charges a fee of \$20 per item for this service. However, this cost is kept low by being subsidized by the monthly rate that all residential customers pay.

NewGen conducted a benchmarking analysis and found that 7 of the 13 communities did not offer bulk service as part of the customers' residential rate. Although the fee structures among these communities varied drastically, all seven of these communities offered a call-in service, meaning that the City of Stillwater's approach to bulk recycling is consistent with the majority of the benchmarked communities. To see the detailed benchmarking data, see Appendix B.

Based on a review of the data, field observations, and benchmarking analysis, NewGen recommends the City continue using a call-in program for its bulk collection.

3.6 Findings and Recommendations

Commercial Solid Waste Collection

- The City would benefit operationally and financially from transitioning from rear-load to front-load dumpster collection for commercial customers.
- Although there are upfront implementation costs, which were included in Scenario 2 of the cost of service analysis, the cost savings are projected to exceed \$300,000 per year once fully implemented.
- By providing front-load collection, the City would be able to offer its services to customers in the City, including Oklahoma State University, that currently utilize front-load containers.

Convenience Collection Center

- The City's convenience collection center is well-maintained and efficiently operated.
- The convenience collection center is relatively space-constrained with no room for expansion. On busier days, traffic can queue up on S. Perkins Road.
- NewGen recommends the addition of a cardboard baler to be placed on-site. This addition will yield an estimated \$67,600 in revenues and cost savings by allowing the City to directly sell clean, source-separated cardboard.

Recycling Processing

- The Republic recycling staging facility utilized by the City is a relatively simple facility with limited operational requirements, minimizing the opportunities for cost savings.
- NewGen believes the City should continue to contract with Republic rather than constructing and operating its own facility based on the current recycling tonnage levels.
- If tonnage levels increase by 25-50%, the City could reconsider developing its own recycling staging facility or baling facility.

Bulk Waste

- NewGen does not recommend any changes to the City's current call-in bulk waste collection program. This method is efficient, on par with industry standards, comparable to the benchmarked cities and provides the City access to a valuable service at a low cost.

Appendix A

Cost of Service Schedules

List of Schedules

Schedule 1	Five-Year Revenue Requirement
Schedule 2	Capital Improvement Plan
Schedule 3	Five-Year Summary
Schedule 4	Residential Cost of Service
Schedule 5	Current Revenue Reconciliation
Schedule 6	Scenario 1 – Proposed Rates
Schedule 7	Scenario 1 – Proposed Revenue Reconciliation
Schedule 8	Scenario 1 – Proposed Reserves
Schedule 9	Scenario 2 – Proposed Rates
Schedule 10	Scenario 2 – Proposed Revenue Reconciliation
Schedule 11	Scenario 2 – Proposed Reserves

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City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
5-Year Revenue Requirement

Line No.	Test Year	Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:	Inflation Factor
1 9180000 - SUA-Waste Mgmt Fund - Transfers Out									
2	71000 - Self Insurance Fund	\$ 500,989	\$ 500,989	\$ 512,161	\$ 523,582	\$ 535,258	\$ 547,194	\$ 559,397	General
3	71000 - General Fund	1,030,000	1,030,000	1,081,500	1,135,575	1,192,354	1,251,971	1,314,570	General Fund Transfer
4	71000 - Waste Management Reserve	-	-	-	-	-	-	-	None
5	Subtotal Transfers Out	\$ 1,530,989	\$ 1,530,989	\$ 1,593,661	\$ 1,659,157	\$ 1,727,612	\$ 1,799,166	\$ 1,873,967	
6 9180000 - SUA-Waste Mgmt Fund									
7	51100 - Compensation Contingency	\$ 32,588	\$ 32,588	\$ 33,315	\$ 34,058	\$ 34,817	\$ 35,594	\$ 36,387	General
8	53067 - Contingency	100,000	100,000	100,000	100,000	100,000	100,000	100,000	None
9	35011 - Waste Administration	-	-	-	-	-	-	-	General
10	53074 - Bank Charges	-	-	-	-	-	-	-	General
11	Subtotal Waste Administration	\$ 132,588	\$ 132,588	\$ 133,315	\$ 134,058	\$ 134,817	\$ 135,594	\$ 136,387	
12 9184818 - Solid Waste Administration									
13	51001 - Full Time	\$ 207,808	\$ 207,808	\$ 214,042	\$ 220,464	\$ 227,077	\$ 233,890	\$ 240,906	Salaries
14	51021 - Social Security	16,268	16,268	16,756	17,259	17,776	18,310	18,859	Salaries
15	51022 - Retirement	12,111	12,111	12,474	12,849	13,234	13,631	14,040	Salaries
16	51023 - Health Insurance	-	-	-	-	-	-	-	Benefits
17	52012 - Vehicle Repair Parts	600	600	618	637	656	675	696	Vehicle Maintenance
18	52031 - Office Supplies	100	100	102	105	107	109	112	General
19	52036 - Janitorial Supplies	1,500	1,500	1,533	1,568	1,603	1,638	1,675	General
20	52042 - Food	350	350	358	366	374	382	391	General
21	52043 - Vehicle Fuel & Oil	1,000	1,000	1,030	1,061	1,093	1,126	1,159	Fuel
22	52900 - Clearing-Materials & Supplies	-	-	-	-	-	-	-	General
23	53001 - Natural Gas	5,000	5,000	5,112	5,225	5,342	5,461	5,583	General
24	53004 - Telecommunications	4,000	4,000	4,089	4,180	4,274	4,369	4,466	General
25	53013 - Land Rental	17,000	17,000	17,379	17,767	18,163	18,568	18,982	General
26	53020 - Repair-Structures	10,000	10,000	10,300	10,609	10,927	11,255	11,593	General Maintenance
27	53022 - Repair-Office Equipment	-	-	-	-	-	-	-	General Maintenance
28	53047 - Public Education	4,000	4,000	4,089	4,180	4,274	4,369	4,466	General
29	53049 - Cash Short	-	-	-	-	-	-	-	General
30	53055 - In-Service Training	-	-	-	-	-	-	-	General
31	53068 - Travel Expense	4,500	4,500	4,600	4,703	4,808	4,915	5,025	General
32	53069 - Professional Services	176,380	176,380	0	0	0	0	0	A Other
33	53076 - Bad Debt Expense	65,000	65,000	66,450	67,931	69,446	70,995	72,578	General
34	53124 - Tort Claim	-	-	-	-	-	-	-	General
35	53900 - Clearing-Other Services & Fees	-	-	-	-	-	-	-	General
36	54999 - Transfer to Assets-Capital	-	-	-	-	-	-	-	General
37	55500 - Interest Exp-Capital Lease	-	-	-	-	-	-	-	General
38	56001 - Indirect Costs	243,437	243,437	255,609	268,389	281,809	295,899	310,694	Indirect Costs
39	56002 - SUA Overhead Allocation	3,900	3,900	3,987	4,076	4,167	4,260	4,355	General
40	57000 - Depreciation Expense	-	-	-	-	-	-	-	General
41	51003 - Overtime	100	100	103	106	109	113	116	Salaries
42	53053 - Licenses & Fees	2,000	2,000	2,045	2,090	2,137	2,184	2,233	General
43	53054 - Dues & Subscriptions	2,400	2,400	2,454	2,508	2,564	2,621	2,680	General
44	53055 - Training	3,900	3,900	3,987	4,076	4,167	4,260	4,355	General
45	53059 - Insurance-Liability	91,983	91,983	94,034	96,131	98,275	100,466	102,707	General
46	35064 - Contract for Services	7,000	7,000	7,156	7,316	7,479	7,646	7,816	General
47	53127 - Janitorial Services	6,000	6,000	6,134	6,271	6,410	6,553	6,700	General
48	51025 - Worker's Compensation	-	-	-	-	-	-	-	Salaries
49	52034 - Postage	-	-	-	-	-	-	-	General
50	53902 - Lease Expense - Clearing	-	-	-	-	-	-	-	General
51	55590 - Lease Interest Expense	-	-	-	-	-	-	-	General
52	57090 - Lease Amortization	-	-	-	-	-	-	-	General
53	Other Equipment	-	-	-	-	-	-	-	General
54	Transfer to Assets-Capital	-	-	-	-	-	-	-	General
55	Grand Expenditure	-	-	-	-	-	-	-	General
56	Admin Vehicle Maintenance Labor	130,085	130,085	132,986	135,951	138,983	142,083	145,251	General
57	Subtotal Solid Waste Administration	1,016,422	\$ 1,016,422	\$ 867,427	\$ 895,817	\$ 925,253	\$ 955,778	\$ 987,436	
58 9184819 - Solid Waste Residential									
59	51001 - Full Time	\$ 719,955	\$ 719,955	\$ 741,554	\$ 763,800	\$ 786,714	\$ 810,316	\$ 834,625	Salaries
60	51002 - Part Time	-	-	-	-	-	-	-	Salaries
61	51003 - Overtime	30,000	30,000	30,900	31,827	32,782	33,765	34,778	Salaries
62	51021 - Social Security	57,371	57,371	59,092	60,865	62,691	64,572	66,509	Salaries
63	51022 - Retirement	44,996	44,996	46,346	47,736	49,168	50,643	52,163	Salaries
64	51023 - Health Insurance	-	-	-	-	-	-	-	Benefits
65	51025 - Workers' Compensation	-	-	-	-	-	-	-	Salaries
66	51045 - Temporary Labor Services	-	-	-	-	-	-	-	General
67	52012 - Vehicle Repair Parts	80,000	80,000	82,400	84,872	87,418	90,041	92,742	Vehicle Maintenance
68	52024 - Other Equipment Parts	150,000	150,000	154,500	159,135	163,909	168,826	173,891	General Maintenance
69	52041 - Clothing & Uniforms	7,500	7,500	7,667	7,838	8,013	8,192	8,374	General
70	52043 - Vehicle Fuel & Oil	130,000	130,000	133,900	137,917	142,055	146,316	150,706	Fuel
71	52045 - Tools	200	200	204	209	214	218	223	General
72	52046 - Minor Supplies	3,000	3,000	3,067	3,135	3,205	3,277	3,350	General
73	52048 - Safety Equipment	1,500	1,500	1,533	1,568	1,603	1,638	1,675	General

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
5-Year Revenue Requirement

Line No.	Test Year	Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:	Inflation Factor
74	53047 - Public Education	-	-	-	-	-	-		General
75	53073 - Landfill Services	409,280	409,280	453,293	477,317	502,615	529,254		Other
76	55000 - Capital Lease Payments	749,547	749,547	741,431	810,181	810,181	810,181		Other
77	56002 - SUA Overhead Allocation	306,276	306,276	313,106	320,088	327,226	334,523		General
78	51004 - Allowance	1,000	1,000	1,022	1,045	1,068	1,092		General
79	53018 - Repair Vehicles	699	699	720	742	764	787		Vehicle Maintenance
80	Recycling Processing and Hauling	220,134	220,134	231,801	244,087	257,023	270,646		Tonnage Growth + CPI
81	Yard Waste	26,829	26,829	13,630	14,353	15,113	15,914		adjustment (Republic)
	Blank	-	-	-	-	-	-		Other
82	Subtotal Solid Waste Residential	\$ 2,938,288	\$ 2,938,288	\$ 3,016,167	\$ 3,166,716	\$ 3,251,763	\$ 3,340,202		General
83	9184820 - Solid Waste Commercial								
84	51001 - Full Time	\$ 248,154	\$ 248,154	\$ 255,599	\$ 263,267	\$ 271,165	\$ 279,300		Salaries
85	51003 - Overtime	15,000	15,000	15,450	15,914	16,391	16,883		Salaries
86	51021 - Social Security	20,131	20,131	20,735	21,357	21,998	22,658		Salaries
87	51022 - Retirement	15,789	15,789	16,263	16,751	17,253	17,771		Salaries
88	51023 - Health Insurance	-	-	-	-	-	-		Benefits
89	51025 - Workers' Compensation	-	-	-	-	-	-		Salaries
90	52012 - Vehicle Repair Parts	80,000	80,000	82,400	84,872	87,418	90,041		Vehicle Maintenance
91	52014 - Other Equipment Parts	77,000	77,000	79,310	81,689	84,140	86,664		General Maintenance
92	52041 - Clothing & Uniforms	6,500	6,500	6,645	6,793	6,945	7,099		General
93	52043 - Vehicle Fuel & Oil	100,000	100,000	103,000	106,090	109,273	112,551		Fuel
94	52048 - Safety Equipment	1,000	1,000	1,022	1,045	1,068	1,092		General
95	52050 - Welding Supplies	20,000	20,000	20,446	20,902	21,368	21,845		General
96	53066 - Miscellaneous Services	-	-	-	-	-	-		General
97	53073 - Landfill Services	456,454	456,454	480,647	506,121	532,945	561,191		Tonnage Growth + CPI
98	55000 - Capital Lease Payments	348,423	348,423	476,779	476,779	476,779	476,779		adjustment (Republic)
99	56002 - SUA Overhead Allocation	163,044	163,044	166,680	170,397	174,197	178,081		Other
100	51004 - Allowance	-	-	-	-	-	-		General
101	55500 - Interest Expense - Capital Lease	-	-	-	-	-	-		General
102	Subtotal Solid Waste Commercial	\$ 1,551,495	\$ 1,551,495	\$ 1,724,975	\$ 1,771,975	\$ 1,820,939	\$ 1,871,954		General
103	9184821 - Solid Waste Street Sweeping								
104	51001 - Full Time	\$ 82,261	\$ 82,261	\$ 84,729	\$ 87,271	\$ 89,889	\$ 92,585		Salaries
105	51003 - Overtime	5,000	5,000	5,150	5,305	5,464	5,628		Salaries
106	51021 - Social Security	6,675	6,675	6,875	7,082	7,294	7,513		Salaries
107	51022 - Retirement	5,235	5,235	5,392	5,554	5,720	5,892		Salaries
108	51023 - Health Insurance	-	-	-	-	-	-		Benefits
109	51025 - Workers' Compensation	-	-	-	-	-	-		Salaries
110	52012 - Vehicle Repair Parts	20,000	20,000	20,600	21,218	21,855	22,510		Vehicle Maintenance
111	52041 - Clothing & Uniforms	750	750	767	784	801	819		General
112	52043 - Vehicle Fuel & Oil	15,000	15,000	15,450	15,914	16,391	16,883		Fuel
113	53069 - Professional Services	-	-	-	-	-	-		General
114	55000 - Capital Lease Payments	-	-	-	-	-	-		None
115	56002 - SUA Overhead Allocation	49,022	49,022	50,115	51,233	52,375	53,543		General
116	51004 - Allowance	-	-	-	-	-	-		General
117	Landfill Disposal (Placeholder)	-	-	-	-	-	-		
118	Subtotal Solid Waste Street Sweeping	\$ 183,943	\$ 183,943	\$ 189,078	\$ 194,359	\$ 199,789	\$ 205,373		
119	9184822 - Solid Waste Convenience Collection Center								
120	51001 - Full Time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		Salaries
121	51003 - Overtime	-	-	-	-	-	-		Salaries
122	51021 - Social Security	-	-	-	-	-	-		Salaries
123	51022 - Retirement	-	-	-	-	-	-		Salaries
124	51023 - Health Insurance	-	-	-	-	-	-		Benefits
125	52041 - Clothing & Uniforms	-	-	-	-	-	-		General
126	53066 - Miscellaneous Services	-	-	-	-	-	-		General
127	52046 - Supplies	3,000	3,000	3,067	3,135	3,205	3,277		General
128	52083 - Goods for Resale	7,000	7,000	7,156	7,316	7,479	7,646		General
129	53064 - Contract for Services	50,000	50,000	51,115	52,255	53,420	54,611		General
130	Subtotal Solid Waste Convenience Collection Center	\$ 60,000	\$ 60,000	\$ 61,338	\$ 62,706	\$ 64,104	\$ 65,534		
131	9184823 - Solid Waste Roll-off Service								
132	51001 - Full Time	\$ 82,511	\$ 82,511	\$ 84,986	\$ 87,536	\$ 90,162	\$ 92,867		Salaries
133	51003 - Overtime	5,000	5,000	5,150	5,305	5,464	5,628		Salaries
134	51021 - Social Security	6,694	6,694	6,895	7,102	7,315	7,534		Salaries
135	51022 - Retirement	5,250	5,250	5,408	5,570	5,737	5,909		Salaries
136	51023 - Health Insurance	-	-	-	-	-	-		Benefits
137	51025 - Workers' Compensation	-	-	-	-	-	-		Salaries
138	52012 - Vehicle Repair Parts	10,000	10,000	10,300	10,609	10,927	11,255		Vehicle Maintenance
139	52041 - Clothing & Uniforms	750	750	767	784	801	819		General
140	52043 - Vehicle Fuel & Oil	30,000	30,000	30,900	31,827	32,782	33,765		Fuel
141	53073 - Landfill Services	86,387	86,387	90,966	95,787	100,863	106,209		Tonnage Growth + CPI
142	55000 - Capital Lease Payments	170,403	170,403	178,498	184,500	184,500	184,500		adjustment (Republic)
									Other

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
5-Year Revenue Requirement

Line No.	Test Year	Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:	Inflation Factor
143	52024 - Equipment Parts	50,000	50,000	51,115	52,255	53,420	54,611	55,829	General
144	55500 - Interest Exp - Capital Lease	-	-	-	-	-	-	-	General
145	51004 - Allowance	-	-	-	-	-	-	-	General
146	Subtotal Solid Waste Roll-off Service	\$ 446,995	\$ 446,995	\$ 464,984	\$ 481,274	\$ 491,971	\$ 503,098	\$ 531,780	
147	9184824 - Solid Waste Recycling								
148	51001 - Full Time	\$ 159,366	\$ 159,366	\$ 164,147	\$ 169,071	\$ 174,144	\$ 179,368	\$ 184,749	Salaries
149	51003 - Overtime	2,500	2,500	2,575	2,652	2,732	2,814	2,898	Salaries
150	51021 - Social Security	12,383	12,383	12,754	13,137	13,531	13,937	14,355	Salaries
151	51022 - Retirement	9,711	9,711	10,002	10,302	10,611	10,930	11,258	Salaries
152	51023 - Health Insurance	-	-	-	-	-	-	-	Benefits
153	51025 - Workers' Compensation	-	-	-	-	-	-	-	Salaries
154	52012 - Vehicle Repair Parts	10,000	10,000	10,300	10,609	10,927	11,255	11,593	Vehicle Maintenance
155	52041 - Clothing & Uniforms	2,450	2,450	2,505	2,560	2,618	2,676	2,736	General
156	52043 - Vehicle Fuel & Oil	15,000	15,000	15,450	15,914	16,391	16,883	17,389	Fuel
157	53047 - Public Education	4,000	4,000	4,089	4,180	4,274	4,369	4,466	General
158	53073 - Landfill Services	159,944	159,944	168,421	177,347	186,746	196,644	207,066	Tonnage Growth + CPI adjustment (TRT)
159	55000 - Capital Lease Payments	-	-	-	-	-	-	-	None
160	52024 - Equipment Parts	-	-	-	-	-	-	-	General
161	Subtotal Solid Waste Recycling	\$ 375,354	\$ 375,354	\$ 390,243	\$ 405,774	\$ 421,974	\$ 438,875	\$ 456,510	
171	Capital Improvement Plan								
172	Equipment Replacement Reserve Replacement	\$ 232,211	\$ 232,211	\$ 239,177	\$ 246,353	\$ 253,743	\$ 261,356	\$ 269,196	Equipment
173	Subtotal Capital Improvement Plan	\$ 232,211	\$ 232,211	\$ 239,177	\$ 246,353	\$ 253,743	\$ 261,356	\$ 269,196	
178	TOTAL EXPENSES	\$ 8,468,285	\$ 8,468,285	\$ 8,680,365	\$ 9,018,187	\$ 9,291,965	\$ 9,576,928	\$ 10,010,017	
179	REVENUES								
180	44504 - Residential Refuse Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	None
181	44505 - Commercial Refuse Sales	-	-	-	-	-	-	-	None
182	44506 - Residential Recycling	-	-	-	-	-	-	-	None
183	44507 - Commercial Recycling	3,000	3,000	3,000	3,000	3,000	3,000	3,000	None
184	44508 - Roll-Off Container	-	-	-	-	-	-	-	None
185	44509 - Street Sweeping	-	-	-	-	-	-	-	None
186	48006 - Blue Trash Bags	14,000	14,000	14,000	14,000	14,000	14,000	14,000	None
187	48213 - Collection Center-Recycling	14,000	14,000	14,000	14,000	14,000	14,000	14,000	None
188	48214 - Collection Center-Refuse	39,000	39,000	39,000	39,000	39,000	39,000	39,000	None
189	48700 - Miscellaneous Revenue	8,000	8,000	8,000	8,000	8,000	8,000	8,000	None
190	48721 - Gain on Sale of Assets	-	-	-	-	-	-	-	None
191	48903 - SUA Revenue Allocation	563,960	563,960	422,970	372,970	322,970	272,970	222,970	Other
192	62001 - Insurance Proceeds	699	699	699	699	699	699	699	None
193	43200 - State Grant Revenue	-	-	-	-	-	-	-	None
194	48007 - Recycle Resale	-	-	-	-	-	-	-	None
195	Subtotal Revenues	\$ 642,659	\$ 642,659	\$ 501,669	\$ 451,669	\$ 401,669	\$ 351,669	\$ 301,669	
196	61000 - Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	None
197	Revenue Total:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
198	TOTAL REVENUES	\$ 642,659	\$ 642,659	\$ 501,669	\$ 451,669	\$ 401,669	\$ 351,669	\$ 301,669	
199	Net Revenue Requirement	\$ 7,825,626	\$ 7,825,626	\$ 8,178,696	\$ 8,566,518	\$ 8,890,296	\$ 9,225,259	\$ 9,708,348	

Notes:

- A. Set to zero for years 2-5 because this expense will no longer be incurred.
 B. Capital lease payment amounts increase according to when new ASLs are purchased. Every 3 years these costs increase.
 C. Capital lease payment amounts increase according to when new rear load trucks are purchased. Every 3 years these costs increase.
 D. Capital lease payment amounts increase according to when new roll-off trucks are purchased. Every 3 years these costs increase.
 E. Approximately 75% of this line item is comprised of interest income. Interest rates are expected to decrease, so the amount has been adjusted downward continuously.

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Capital Improvement Plan

Line No.	Description		Year 1 FY 2025	Year 2 FY 2026	Year 3 FY 2027	Year 4 FY 2028	Year 5 FY 2029	Year 6 FY 2030	Year 7 FY 2031	Year 8 FY 2032	Year 9 FY 2033	Year 10 FY 2034	Total
Facility Improvements													
1		Replacement Schedule (Years)	Impact Year	Impact Year 2	Replacement Cost								
2	Parking Lot	N/A	2026	N/A	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000
3	Sum:					\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000
Rolling Stock Purchases													
4		Replacement Schedule (Years)	Impact Year	Impact Year 2	Replacement Cost								
5	Street Sweeper 1	7	2025	2032	\$ 365,000	\$ 365,000	\$ -	\$ -	\$ -	\$ -	\$ 462,371	\$ -	\$ 827,371
6	Street Sweeper 2	7	2026	2033	365,000	-	387,229	-	-	-	-	476,242	863,471
7	Pick up Truck	10	2026	2036	40,000	-	42,436	-	-	-	-	-	42,436
8	Pick up Truck	10	2027	2037	40,000	-	-	43,709	-	-	-	-	43,709
9	Pick up Truck	10	2028	2038	40,000	-	-	-	45,020	-	-	-	45,020
10	Pick up Truck	10	2029	2039	40,000	-	-	-	-	46,371	-	-	46,371
11	Pick up Truck	10	2030	2040	40,000	-	-	-	-	-	47,762	-	47,762
12	Pick up Truck	10	2031	2041	40,000	-	-	-	-	-	-	49,195	49,195
13	Isuzu NRR (Small Garbage Truck)	10	2027	2037	100,000	-	-	109,273	-	-	-	-	109,273
14	Skid Steer	10	2028	2038	50,000	-	-	-	56,275	-	-	-	56,275
15	Petersen Industries PL3 (Grapple Unit)	10	2027	2037	175,000	-	-	191,227	-	-	-	-	191,227
16	Sum:					\$ 365,000	\$ 429,665	\$ 344,209	\$ 101,296	\$ 46,371	\$ 47,762	\$ 49,195	\$ 2,322,111
17													
18													
												10 Year Total	\$ 2,322,111
												Annual Contribution	\$ 232,211

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
5-Year Summary

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
1	Residential Collection						
2	Refuse	\$ 1,398,097	\$ 1,420,497	\$ 1,492,766	\$ 1,517,580	\$ 1,543,085	\$ 1,623,468
3	Recycling	752,725	769,098	804,340	819,366	834,814	874,814
4	Yard Waste	160,581	154,454	158,671	163,024	167,517	173,421
5	Glass	87,036	92,834	95,019	97,266	99,575	103,214
6	Bulky Waste	140,536	142,210	149,884	152,220	154,620	162,989
7	Container Maintenance/Delivery	93,030	95,597	98,235	100,947	103,736	106,602
8	Subtotal Residential Collection	\$ 2,632,006	\$ 2,674,691	\$ 2,798,916	\$ 2,850,403	\$ 2,903,346	\$ 3,044,509
9	Commercial Rear-Load						
10	Refuse	\$ 1,318,570	\$ 1,450,232	\$ 1,479,106	\$ 1,508,776	\$ 1,539,266	\$ 1,606,270
11	Cardboard	83,554	93,505	95,238	97,021	98,853	103,583
12	Container Maintenance/Delivery	126,849	130,256	133,756	137,352	141,047	144,843
13	Subtotal Commercial Rear-Load	\$ 1,528,974	\$ 1,673,993	\$ 1,708,100	\$ 1,743,149	\$ 1,779,166	\$ 1,854,696
14	Commercial Roll-off						
15	Refuse/Recycling	\$ 373,838	\$ 389,422	\$ 397,160	\$ 404,488	\$ 412,014	\$ 430,946
16	Container Maintenance/Delivery	12,056	12,374	12,700	13,036	13,380	13,733
17	Subtotal Commercial Roll-off	\$ 385,893	\$ 401,796	\$ 409,860	\$ 417,524	\$ 425,393	\$ 444,679
18	Disposal	\$ 952,121	\$ 1,024,905	\$ 1,079,225	\$ 1,136,424	\$ 1,196,654	\$ 1,260,077
19	Recycling Processing	\$ 380,078	\$ 400,222	\$ 421,434	\$ 443,770	\$ 467,290	\$ 492,056
20	Convenience Collection Center	\$ 127,793	\$ 133,088	\$ 138,529	\$ 144,121	\$ 149,868	\$ 155,774
21	Street Sweeping	\$ 364,910	\$ 375,260	\$ 385,908	\$ 396,861	\$ 408,129	\$ 419,721
22	Administration	\$ 1,444,120	\$ 1,484,732	\$ 1,614,251	\$ 1,747,453	\$ 1,884,517	\$ 2,025,627
23	Events	\$ 9,731	\$ 10,010	\$ 10,297	\$ 10,592	\$ 10,896	\$ 11,209
24	Total	\$ 7,825,626	\$ 8,178,696	\$ 8,566,518	\$ 8,890,296	\$ 9,225,259	\$ 9,708,348

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Residential COS

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Note:
1	Direct Costs							
2	Residential Collection							
3	Refuse	\$ 1,398,097	\$ 1,420,497	\$ 1,492,766	\$ 1,517,580	\$ 1,543,085	\$ 1,623,468	
4	Recycling	752,725	769,098	804,340	819,366	834,814	874,814	
5	Yard Waste	160,581	154,454	158,671	163,024	167,517	173,421	
6	Glass	87,036	92,834	95,019	97,266	99,575	103,214	
7	Bulky Waste	140,536	142,210	149,884	152,220	154,620	162,989	
8	Container Maintenance/Delivery	93,030	95,597	98,235	100,947	103,736	106,602	
9	Events	9,731	10,010	10,297	10,592	10,896	11,209	A
10	Subtotal Residential Collection	\$ 2,641,737	\$ 2,684,701	\$ 2,809,213	\$ 2,860,995	\$ 2,914,242	\$ 3,055,718	
11	Convenience Collection Center	\$ 127,793	\$ 133,088	\$ 138,529	\$ 144,121	\$ 149,868	\$ 155,774	
12	Roll-off Collection Services for CCC	\$ 238,440	\$ 247,454	\$ 255,238	\$ 263,629	\$ 272,242	\$ 286,633	
13	Indirect Costs							
14	Administration	\$ 792,096	\$ 794,039	\$ 872,842	\$ 944,028	\$ 1,017,187	\$ 1,096,904	A
15	Disposal and Processing Cost							
16	Residential Refuse	\$ 409,280	\$ 453,293	\$ 477,317	\$ 502,615	\$ 529,254	\$ 557,304	
17	Recycling	302,395	318,422	335,299	353,070	371,782	391,487	
18	Collection Center - Recycling Processing	58,778	61,894	65,174	68,628	72,265	76,096	
19	Collection Center - Disposal	16,855	17,748	18,689	19,680	20,723	21,821	
20	Total Disposal and Processing	\$ 787,309	\$ 851,357	\$ 896,479	\$ 943,992	\$ 994,024	\$ 1,046,707	
21	Total Residential Cost of Service	\$ 4,587,374	\$ 4,710,638	\$ 4,972,301	\$ 5,156,766	\$ 5,347,563	\$ 5,641,735	
22	Billing Units (Customers by Cart Size)							
23	35	1,298	1,304	1,317	1,330	1,343	1,357	
24	48	125	126	128	129	130	131	
25	64	3,227	3,253	3,286	3,319	3,352	3,385	
26	96	9,329	9,201	9,293	9,386	9,480	9,575	
27	Customers with Extra							
28	128	48	48	49	49	50	50	
29	192	790	783	791	798	806	815	
30	Total Units	14,817	14,716	14,863	15,011	15,162	15,313	
31	Direct Costs							
32	Residential Collection							
33	Refuse	\$ 7.86	\$ 8.04	\$ 8.37	\$ 8.42	\$ 8.48	\$ 8.83	
34	Recycling	4.23	4.36	4.51	4.55	4.59	4.76	
35	Yard Waste	0.90	0.87	0.89	0.90	0.92	0.94	
36	Glass	0.49	0.53	0.53	0.54	0.55	0.56	
37	Bulky Waste	0.79	0.81	0.84	0.85	0.85	0.89	
38	Container Maintenance/Delivery	0.52	0.54	0.55	0.56	0.57	0.58	
39	Events	0.05	0.06	0.06	0.06	0.06	0.06	
40	Roll-off Portion	1.34	1.40	1.43	1.46	1.50	1.56	
41	Subtotal Residential Collection	\$ 16.20	\$ 16.60	\$ 17.18	\$ 17.35	\$ 17.51	\$ 18.19	
42	Convenience Collection Center	\$ 0.72	\$ 0.75	\$ 0.78	\$ 0.80	\$ 0.82	\$ 0.85	

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Residential COS

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Note:
43	Indirect Cost							
44	Administration	\$ 4.45	\$ 4.50	\$ 4.89	\$ 5.24	\$ 5.59	\$ 5.97	
		\$ 4.45	\$ 4.50	\$ 4.89	\$ 5.24	\$ 5.59	\$ 5.97	
45	Budgeted Landfill Services	\$ 787,309	\$ 851,357	\$ 896,479	\$ 943,992	\$ 994,024	\$ 1,046,707	
46	Monthly Capacity	5,682,586	5,632,039	5,688,359	5,745,243	5,802,696	5,860,722	
47	\$/Gallon per month	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.014	\$ 0.015	
48	Monthly Disposal cost (by Container size)							
49	35	\$ 1.75	\$ 1.91	\$ 1.99	\$ 2.08	\$ 2.17	\$ 2.26	
50	48	\$ 2.40	\$ 2.62	\$ 2.73	\$ 2.85	\$ 2.97	\$ 3.10	
51	64	\$ 3.20	\$ 3.49	\$ 3.64	\$ 3.80	\$ 3.96	\$ 4.13	
52	96	\$ 4.80	\$ 5.24	\$ 5.46	\$ 5.70	\$ 5.94	\$ 6.19	
53	128	\$ 6.40	\$ 6.99	\$ 7.28	\$ 7.59	\$ 7.92	\$ 8.26	
54	192	\$ 9.61	\$ 10.48	\$ 10.93	\$ 11.39	\$ 11.88	\$ 12.38	
55	Monthly COS (Single Cart)							
56	35	\$ 23.12	\$ 23.77	\$ 24.84	\$ 25.46	\$ 26.09	\$ 27.26	
57	48	\$ 23.77	\$ 24.47	\$ 25.58	\$ 26.23	\$ 26.90	\$ 28.10	
58	64	\$ 24.57	\$ 25.35	\$ 26.49	\$ 27.18	\$ 27.89	\$ 29.13	
59	96	\$ 26.18	\$ 27.09	\$ 28.32	\$ 29.08	\$ 29.87	\$ 31.20	
60	Monthly COS (Multiple Carts)							
61	64	\$ 27.78	\$ 28.84	\$ 30.14	\$ 30.98	\$ 31.85	\$ 33.26	
62	96	\$ 30.98	\$ 32.34	\$ 33.78	\$ 34.78	\$ 35.81	\$ 37.39	

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Revenue Reconciliation - Current Rates

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
1	Residential						
2	Net Revenue Requirement	\$ 4,587,374	\$ 4,710,638	\$ 4,972,301	\$ 5,156,766	\$ 5,347,563	\$ 5,641,735
3	Revenue	3,967,128	4,006,799	4,046,867	4,087,336	4,128,209	4,169,491
4	Over/(Under)	(620,246)	(703,839)	(925,433)	(1,069,430)	(1,219,353)	(1,472,244)
5	Cumulative Over/(Under)	(620,246)	(1,324,085)	(2,249,519)	(3,318,948)	(4,538,302)	(6,010,545)
6	Commercial Rear Load						
7	Net Revenue Requirement - Refuse	\$ 2,307,658	\$ 2,498,693	\$ 2,588,534	\$ 2,687,948	\$ 2,790,852	\$ 2,931,459
8	Net Revenue Requirement - Cardboard	\$ 205,948	\$ 222,278	\$ 229,478	\$ 237,398	\$ 245,560	\$ 258,657
9	Revenue						
10	Commercial	\$ 1,527,558	\$ 1,535,196	\$ 1,542,872	\$ 1,550,587	\$ 1,558,340	\$ 1,566,131
11	Apartment Resident Paying with Dumpster	729,738	737,035	744,406	751,850	759,368	766,962
12	Shared Accounts	84,007	84,847	85,695	86,552	87,418	88,292
13	Multifamily Residents Paying Opt Out Fee	37,154	37,526	37,901	38,280	38,663	39,050
14	Commercial Customers Paying Non-Subscription Fee	95,674	95,674	95,674	95,674	95,674	95,674
15	Total Revenue	\$ 2,474,132	\$ 2,490,279	\$ 2,506,549	\$ 2,522,943	\$ 2,539,463	\$ 2,556,109
16	Over/(Under)	\$ (39,474)	\$ (230,692)	\$ (311,463)	\$ (402,402)	\$ (496,949)	\$ (634,008)
17	Cumulative Over/(Under)	(39,474)	(270,167)	(581,630)	(984,032)	(1,480,981)	(2,114,989)
18	Roll-Off (Charged Customers)						
19	Open Top						
20	Collection	\$ 77,173	\$ 80,090	\$ 82,610	\$ 85,326	\$ 88,113	\$ 92,771
21	Disposal	20,698	21,795	22,950	24,166	25,447	26,796
22	Net Revenue Requirement	\$ 97,871	\$ 101,885	\$ 105,560	\$ 109,492	\$ 113,560	\$ 119,567
23	Compactor						
24	Collection	\$ 108,665	\$ 112,773	\$ 116,321	\$ 120,144	\$ 124,070	\$ 130,628
25	Disposal	48,834	51,422	54,148	57,018	60,040	63,222
26	Net Revenue Requirement	\$ 157,499	\$ 164,195	\$ 170,468	\$ 177,162	\$ 184,109	\$ 193,850
27	Revenue	\$ 164,772	\$ 166,012	\$ 167,263	\$ 168,526	\$ 169,801	\$ 171,087
28	Over/(Under)	\$ (90,599)	\$ (100,069)	\$ (108,765)	\$ (118,128)	\$ (127,869)	\$ (142,329)
29	Cumulative Over/(Under)	(90,599)	(190,667)	(299,432)	(417,560)	(545,429)	(687,758)
30	Street Sweeping						
31	Net Revenue Requirement	\$ 469,275	\$ 481,007	\$ 500,177	\$ 521,531	\$ 543,615	\$ 563,080
32	Revenue	545,136	550,587	556,093	561,654	567,271	572,944
33	Over/(Under)	\$ 75,861	\$ 69,581	\$ 55,916	\$ 40,123	\$ 23,655	\$ 9,864
34	Cumulative Over/(Under)	75,861	145,442	201,358	241,481	265,137	275,001
35	Total Revenue Requirement	\$ 7,825,626	\$ 8,178,696	\$ 8,566,518	\$ 8,890,296	\$ 9,225,259	\$ 9,708,348
36	Total Revenues	\$ 7,151,168	\$ 7,213,677	\$ 7,276,772	\$ 7,340,459	\$ 7,404,744	\$ 7,469,631
37	Total Over/(Under)	\$ (674,458)	\$ (965,019)	\$ (1,289,746)	\$ (1,549,837)	\$ (1,820,515)	\$ (2,238,716)
38	Cumulative Over/(Under)	(674,458)	(1,639,477)	(2,929,223)	(4,479,060)	(6,299,575)	(8,538,291)

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 1

	Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:
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Residential Rates

Inside City Limits

35 gallon cart	\$ 15.93	\$ 17.36	\$ 18.75	\$ 20.07	\$ 21.27	\$ 22.33
48 gallon cart	\$ 17.24	\$ 18.79	\$ 20.29	\$ 21.72	\$ 23.02	\$ 24.17
64 gallon cart	\$ 18.56	\$ 20.23	\$ 21.85	\$ 23.38	\$ 24.78	\$ 26.02
2 - 64 gallon carts	\$ 31.01	\$ 33.80	\$ 36.50	\$ 39.06	\$ 41.40	\$ 43.47
96 gallon cart	\$ 21.20	\$ 23.11	\$ 24.96	\$ 26.70	\$ 28.31	\$ 29.72
2 - 96 gallon carts	\$ 34.70	\$ 37.82	\$ 40.85	\$ 43.71	\$ 46.33	\$ 48.65
Houseside customer 96 gallon cart	\$ 32.27	\$ 35.17	\$ 37.99	\$ 40.65	\$ 43.09	\$ 45.24
Apartment resident paying with a dumpster	\$ 17.13	\$ 18.67	\$ 20.17	\$ 21.58	\$ 22.87	\$ 24.02
Disability customer 35 gallon cart	\$ 15.93	\$ 17.36	\$ 18.75	\$ 20.07	\$ 21.27	\$ 22.33
Disability customer 48 gallon cart	\$ 17.24	\$ 18.79	\$ 20.29	\$ 21.72	\$ 23.02	\$ 24.17
Disability customer 64 gallon cart	\$ 18.56	\$ 20.23	\$ 21.85	\$ 23.38	\$ 24.78	\$ 26.02
Disability customer 96 gallon cart	\$ 21.20	\$ 23.11	\$ 24.96	\$ 26.70	\$ 28.31	\$ 29.72
Disability customer 2 - 96 gallon carts	\$ 34.70	\$ 37.82	\$ 40.85	\$ 43.71	\$ 46.33	\$ 48.65
Tenant paying the opt out fee	\$ 2.74	\$ 2.99	\$ 3.23	\$ 3.45	\$ 3.66	\$ 3.84

Outside City Limits

35 gallon cart	\$ 34.24	\$ 37.32	\$ 40.31	\$ 43.13	\$ 45.72	\$ 48.00
64 gallon cart	\$ 35.54	\$ 38.74	\$ 41.84	\$ 44.77	\$ 47.45	\$ 49.82
96 gallon cart	\$ 38.19	\$ 41.63	\$ 44.96	\$ 48.10	\$ 50.99	\$ 53.54
2 - 96 gallon carts	\$ 51.69	\$ 56.34	\$ 60.85	\$ 65.11	\$ 69.02	\$ 72.47

Commercial Businesses with Carts Inside City Limits

35 gallon cart	\$ 15.93	\$ 17.36	\$ 18.75	\$ 20.07	\$ 21.27	\$ 22.33
64 gallon cart	\$ 18.56	\$ 20.23	\$ 21.85	\$ 23.38	\$ 24.78	\$ 26.02
96 gallon cart	\$ 21.20	\$ 23.11	\$ 24.96	\$ 26.70	\$ 28.31	\$ 29.72
2 - 96 gallon carts	\$ 34.70	\$ 37.82	\$ 40.85	\$ 43.71	\$ 46.33	\$ 48.65

Commercial Businesses with Carts Outside City Limits

96 gallon cart	\$ 38.19	\$ 41.63	\$ 44.96	\$ 48.10	\$ 50.99	\$ 53.54
2 - 96 gallon carts	\$ 51.69	\$ 56.34	\$ 60.85	\$ 65.11	\$ 69.02	\$ 72.47

Street Sweeping Rates

Street Sweeping Rate	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33
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Roll-Off and Compactor Rates

Deliveries Inside City Limits

20 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
30 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
40 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67

Deliveries Outside City Limits

20 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83
30 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83
40 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83

Monthly Rental Fee Inside City Limits

20 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
30 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
40 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 1

	Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:
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Monthly Rental Fee Outside City Limits

20 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83	
30 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83	
40 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83	

Disposal (per ton)

Open top and Compactors	\$ 46.91	\$ 42.93	\$ 44.65	\$ 46.43	\$ 48.29	\$ 50.22	1
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Pull Fees - Inside City Limits

Compactors	\$ -	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
Compactor Reversal Fee	\$ -	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 76.00	
Cardboard							
20 CY	\$ -	\$ 195.00	\$ 195.00	\$ 195.00	\$ 195.00	\$ 195.00	3
30 CY	\$ -	\$ 225.00	\$ 225.00	\$ 225.00	\$ 225.00	\$ 225.00	3
Open Top Refuse							
20 CY	\$ 330.00	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
30 CY	\$ 330.00	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
40 CY	\$ 330.00	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2

Pull Fees - Outside City Limits

20 CY	\$ 363.00	\$ 335.00	\$ 348.40	\$ 362.34	\$ 376.83	\$ 391.90	2
30 CY	\$ 363.00	\$ 335.00	\$ 348.40	\$ 362.34	\$ 376.83	\$ 391.90	2
40 CY	\$ 363.00	\$ 335.00	\$ 348.40	\$ 362.34	\$ 376.83	\$ 391.90	2

Other Commercial Rates**Commercial Shared and Non-Subscription Rates**

Shared Accounts	\$ 27.78	\$ 28.89	\$ 30.05	\$ 31.25	\$ 32.50	\$ 33.80	
Commercial Non-Subscription Fee	\$ 27.78	\$ 28.89	\$ 30.05	\$ 31.25	\$ 32.50	\$ 33.80	

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 1

	Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:
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Commercial Rear-Load - Inside City Limits

Current Rates - FY 2025		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 42.97	\$ 85.94	\$ 128.98	\$ 171.90	\$ 214.87	\$ 257.97
	3	\$ 64.22	\$ 128.46	\$ 192.69	\$ 256.93	\$ 321.15	\$ 385.37
	4	\$ 85.94	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2026		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 47.27	\$ 94.53	\$ 139.30	\$ 185.65	\$ 232.06	\$ 278.61
	3	\$ 68.07	\$ 136.17	\$ 200.40	\$ 256.93	\$ 321.15	\$ 385.37
	4	\$ 89.38	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2027		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 51.99	\$ 103.99	\$ 150.44	\$ 200.50	\$ 250.62	\$ 300.90
	3	\$ 72.16	\$ 144.34	\$ 208.41	\$ 267.21	\$ 334.00	\$ 400.78
	4	\$ 92.95	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2028		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 57.19	\$ 114.39	\$ 162.48	\$ 216.54	\$ 270.67	\$ 324.97
	3	\$ 76.49	\$ 153.00	\$ 216.75	\$ 277.90	\$ 347.36	\$ 416.82
	4	\$ 96.67	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2029		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 62.91	\$ 125.82	\$ 175.48	\$ 233.87	\$ 292.33	\$ 350.97
	3	\$ 81.08	\$ 162.18	\$ 225.42	\$ 289.01	\$ 361.25	\$ 433.49
	4	\$ 99.57	\$ 177.06	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 1

	Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Notes:
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Commercial Rear-Load - Outside City Limits

Current Rates - FY 2025		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 47.27	\$ 94.53	\$ 141.88	\$ 189.09	\$ 236.36	\$ 283.77
	3	\$ 70.64	\$ 141.31	\$ 211.96	\$ 282.62	\$ 353.27	\$ 423.91
	4	\$ 94.53	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2026		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 52.00	\$ 103.98	\$ 153.23	\$ 204.22	\$ 255.27	\$ 306.47
	3	\$ 74.88	\$ 149.79	\$ 220.44	\$ 282.62	\$ 353.27	\$ 423.91
	4	\$ 98.31	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2027		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 57.20	\$ 114.38	\$ 165.49	\$ 220.55	\$ 275.69	\$ 330.99
	3	\$ 79.37	\$ 158.78	\$ 229.26	\$ 293.92	\$ 367.40	\$ 440.87
	4	\$ 102.24	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2028		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 62.92	\$ 125.82	\$ 178.73	\$ 238.20	\$ 297.75	\$ 357.47
	3	\$ 84.13	\$ 168.30	\$ 238.43	\$ 305.68	\$ 382.10	\$ 458.50
	4	\$ 106.33	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2029		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 69.21	\$ 138.40	\$ 193.03	\$ 257.25	\$ 321.57	\$ 386.07
	3	\$ 89.18	\$ 178.40	\$ 247.96	\$ 317.91	\$ 397.38	\$ 476.84
	4	\$ 109.52	\$ 194.76	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Notes:

1. Disposal rate for roll-off and compactors customers is equal to the tonnage rate the City pays Republic starting in FY 2026.
2. Rates for all roll-off compactors, starting in FY 2026, include a fee per pull plus the actual cost of disposal.
3. The rates for cardboard roll-off are in the existing ordinance but have not been implemented (until FY 2026).

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Revenue Reconciliation - Scenario 1 Proposed Rates

Note:

		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
1	Residential						
2	Net Revenue Requirement	\$ 4,587,374	\$ 4,710,638	\$ 4,972,301	\$ 5,156,766	\$ 5,347,563	\$ 5,641,735
3	Revenue	\$ 3,967,128	\$ 4,187,105	\$ 4,587,529	\$ 4,980,018	\$ 5,355,906	\$ 5,706,198
4	Over/(Under)	\$ (620,246)	\$ (523,533)	\$ (384,772)	\$ (176,747)	\$ 8,344	\$ 64,463
5	Cumulative Over/(Under)	\$ (620,246)	\$ (1,143,779)	\$ (1,528,551)	\$ (1,705,299)	\$ (1,696,955)	\$ (1,632,492)
6	Commercial Rear Load						
7	Net Revenue Requirement - Refuse	\$ 2,307,658	\$ 2,498,693	\$ 2,588,534	\$ 2,687,948	\$ 2,790,852	\$ 2,931,459
8	Net Revenue Requirement - Recycling	\$ 205,948	\$ 222,278	\$ 229,478	\$ 237,398	\$ 245,560	\$ 258,657
9	Revenue						
10	Commercial	\$ 1,527,558	\$ 1,566,483	\$ 1,640,152	\$ 1,720,540	\$ 1,810,335	\$ 1,910,308
11	Apartment Resident Paying with Dumpster	729,738	770,202	843,858	916,055	985,198	1,049,633
12	Shared Accounts	84,007	86,544	90,906	95,487	100,300	105,355
13	Multifamily Residents Paying Opt Out Fee	37,154	39,215	42,965	46,641	50,161	53,442
14	Commercial Customers Paying Non-Subscription Fee	95,674	97,588	101,491	105,551	109,773	114,164
15	Commercial Dumpster	-	-	-	-	-	-
16	Cardboard Roll-off	-	21,949	44,118	44,338	44,560	44,783
17	Total Revenue	\$ 2,474,132	\$ 2,581,980	\$ 2,763,490	\$ 2,928,612	\$ 3,100,327	\$ 3,277,684
18	Over/(Under)	\$ (39,474)	\$ (138,991)	\$ (54,522)	\$ 3,267	\$ 63,916	\$ 87,568
19	Cumulative Over/(Under)	\$ (39,474)	\$ (178,465)	\$ (232,987)	\$ (229,720)	\$ (165,805)	\$ (78,237)
20	Roll-Off (Charged Customers)						
21	Collection	\$ 185,838	\$ 192,863	\$ 198,930	\$ 205,470	\$ 212,183	\$ 223,399
22	Disposal	69,532	73,217	77,098	81,184	85,487	90,017
23	Net Revenue Requirement	\$ 255,370	\$ 266,080	\$ 276,028	\$ 286,654	\$ 297,669	\$ 313,416
24	Revenue						
25	Other Revenues	\$ 34,730	\$ 35,602	\$ 37,211	\$ 38,893	\$ 40,651	\$ 42,488
26	Pull Fee Revenue	74,547	118,923	167,015	174,564	182,454	190,701
27	Disposal Revenue	55,495	76,610	75,615	79,623	83,843	88,286
28	Total Revenue	\$ 164,772	\$ 231,134	\$ 279,841	\$ 293,080	\$ 306,948	\$ 321,476
27	Over/(Under)	\$ (90,599)	\$ (34,946)	\$ 3,813	\$ 6,426	\$ 9,279	\$ 8,060
29	Cumulative Over/(Under)	\$ (90,599)	\$ (125,544)	\$ (121,731)	\$ (115,306)	\$ (106,027)	\$ (97,967)
30	Street Sweeping						
31	Net Revenue Requirement	\$ 469,275	\$ 481,007	\$ 500,177	\$ 521,531	\$ 543,615	\$ 563,080
32	Revenue	\$ 545,136	\$ 550,587	\$ 556,093	\$ 561,654	\$ 567,271	\$ 572,944
33	Over/(Under)	\$ 75,861	\$ 69,581	\$ 55,916	\$ 40,123	\$ 23,655	\$ 9,864
34	Cumulative Over/(Under)	\$ 75,861	\$ 145,442	\$ 201,358	\$ 241,481	\$ 265,137	\$ 275,001
35	Total Revenue Requirement	\$ 7,825,626	\$ 8,178,696	\$ 8,566,518	\$ 8,890,296	\$ 9,225,259	\$ 9,708,348
36	Total Revenues	\$ 7,151,168	\$ 7,550,807	\$ 8,186,953	\$ 8,763,365	\$ 9,330,452	\$ 9,878,302
37	Total Over/(Under)	\$ (674,458)	\$ (627,888)	\$ (379,565)	\$ (126,932)	\$ 105,193	\$ 169,954
38	Cumulative Over/(Under)	\$ (674,458)	\$ (1,302,347)	\$ (1,681,912)	\$ (1,808,844)	\$ (1,703,650)	\$ (1,533,696)

Note:

1: Includes delivery and monthly rental fees.

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Reserve Balance - Scenario 1 Proposed Rates

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
	Waste Management Restricted/Designated Fund						
1	Beginning Balance	\$ 2,746,708	\$ 1,872,250	\$ 544,361	\$ 139,796	\$ 12,864	\$ 118,058
2	Additions:						
3	Capital Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Reductions:						
5	Parking Lot	\$ -	\$ (500,000)	\$ -	\$ -	\$ -	\$ -
6	Transfer to Capital Replacement Reserve	\$ (200,000)	\$ (200,000)	\$ (25,000)	\$ -	\$ -	\$ -
7	Over/Under Recovery From Proposed Rates	\$ (674,458)	\$ (627,888)	\$ (379,565)	\$ (126,932)	\$ 105,193	\$ 169,954
8	Ending Balance	\$ 1,872,250	\$ 544,361	\$ 139,796	\$ 12,864	\$ 118,058	\$ 288,012
	Operating Reserve	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
	Total Fund Balance	\$ 2,872,250	\$ 1,544,361	\$ 1,139,796	\$ 1,012,864	\$ 1,118,058	\$ 1,288,012

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 2

Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
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Note:

Residential Rates**Inside City Limits**

35 gallon cart	\$ 15.93	\$ 17.20	\$ 18.58	\$ 19.70	\$ 20.88	\$ 21.92
48 gallon cart	\$ 17.24	\$ 18.62	\$ 20.11	\$ 21.32	\$ 22.59	\$ 23.72
64 gallon cart	\$ 18.56	\$ 20.04	\$ 21.65	\$ 22.95	\$ 24.32	\$ 25.54
2 - 64 gallon carts	\$ 31.01	\$ 33.49	\$ 36.17	\$ 38.34	\$ 40.64	\$ 42.67
96 gallon cart	\$ 21.20	\$ 22.90	\$ 24.73	\$ 26.21	\$ 27.78	\$ 29.17
2 - 96 gallon carts	\$ 34.70	\$ 37.48	\$ 40.47	\$ 42.90	\$ 45.48	\$ 47.75
Houseside customer 96 gallon cart	\$ 32.27	\$ 34.85	\$ 37.64	\$ 39.90	\$ 42.29	\$ 44.41
Apartment resident paying with a dumpster	\$ 17.13	\$ 18.50	\$ 19.98	\$ 21.18	\$ 22.45	\$ 23.57
Disability customer 35 gallon cart	\$ 15.93	\$ 17.20	\$ 18.58	\$ 19.70	\$ 20.88	\$ 21.92
Disability customer 48 gallon cart	\$ 17.24	\$ 18.62	\$ 20.11	\$ 21.32	\$ 22.59	\$ 23.72
Disability customer 64 gallon cart	\$ 18.56	\$ 20.04	\$ 21.65	\$ 22.95	\$ 24.32	\$ 25.54
Disability customer 96 gallon cart	\$ 21.20	\$ 22.90	\$ 24.73	\$ 26.21	\$ 27.78	\$ 29.17
Disability customer 2 - 96 gallon carts	\$ 34.70	\$ 37.48	\$ 40.47	\$ 42.90	\$ 45.48	\$ 47.75
Tenant paying the opt out fee	\$ 2.74	\$ 2.96	\$ 3.20	\$ 3.39	\$ 3.59	\$ 3.77

Outside City Limits

35 gallon cart	\$ 34.24	\$ 36.98	\$ 39.94	\$ 42.33	\$ 44.87	\$ 47.12
64 gallon cart	\$ 35.54	\$ 38.38	\$ 41.45	\$ 43.94	\$ 46.58	\$ 48.91
96 gallon cart	\$ 38.19	\$ 41.25	\$ 44.54	\$ 47.22	\$ 50.05	\$ 52.55
2 - 96 gallon carts	\$ 51.69	\$ 55.83	\$ 60.29	\$ 63.91	\$ 67.74	\$ 71.13

Commercial Businesses with Carts Inside City Limits

35 gallon cart	\$ 15.93	\$ 17.20	\$ 18.58	\$ 19.70	\$ 20.88	\$ 21.92
64 gallon cart	\$ 18.56	\$ 20.04	\$ 21.65	\$ 22.95	\$ 24.32	\$ 25.54
96 gallon cart	\$ 21.20	\$ 22.90	\$ 24.73	\$ 26.21	\$ 27.78	\$ 29.17
2 - 96 gallon carts	\$ 34.70	\$ 37.48	\$ 40.47	\$ 42.90	\$ 45.48	\$ 47.75

Commercial Businesses with Carts Outside City Limits

96 gallon cart	\$ 38.19	\$ 41.25	\$ 44.54	\$ 47.22	\$ 50.05	\$ 52.55
2 - 96 gallon carts	\$ 51.69	\$ 55.83	\$ 60.29	\$ 63.91	\$ 67.74	\$ 71.13

Street Sweeping Rates

Street Sweeping Rate	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33
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Roll-Off Rates**Deliveries Inside City Limits**

20 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
30 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
40 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67

Deliveries Outside City Limits

20 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83
30 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83
40 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83

Monthly Rental Fee Inside City Limits

20 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
30 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67
40 CY	\$ 100.00	\$ 104.00	\$ 108.16	\$ 112.49	\$ 116.99	\$ 121.67

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 2

	Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Note:
Monthly Rental Fee Outside City Limits							
20 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83	
30 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83	
40 CY	\$ 110.00	\$ 114.40	\$ 118.98	\$ 123.74	\$ 128.68	\$ 133.83	
Disposal							
Open top and Compactors	\$ 46.91	\$ 42.93	\$ 44.65	\$ 46.43	\$ 48.29	\$ 50.22	1
Pull Fees - Inside City Limits							
Compactors	\$ -	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
Compactor Reversal Fee	\$ -	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00	\$ 76.00	
Cardboard							
20 CY	\$ -	\$ 195.00	\$ 195.00	\$ 195.00	\$ 195.00	\$ 195.00	3
30 CY	\$ -	\$ 225.00	\$ 225.00	\$ 225.00	\$ 225.00	\$ 225.00	3
Open Top Refuse							
20 CY	\$ 330.00	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
30 CY	\$ 330.00	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
40 CY	\$ 330.00	\$ 300.00	\$ 312.00	\$ 324.48	\$ 337.46	\$ 350.96	2
Pull Fees - Outside City Limits							
20 CY	\$ 363.00	\$ 335.00	\$ 348.40	\$ 362.34	\$ 376.83	\$ 391.90	2
30 CY	\$ 363.00	\$ 335.00	\$ 348.40	\$ 362.34	\$ 376.83	\$ 391.90	2
40 CY	\$ 363.00	\$ 335.00	\$ 348.40	\$ 362.34	\$ 376.83	\$ 391.90	2
Other Commercial Rates							
Commercial Shared and Non-Subscription Rates							
Shared Accounts	\$ 27.78	\$ 28.89	\$ 30.05	\$ 31.25	\$ 31.25	\$ 31.25	
Commercial Customers Paying Non-Subscription Fee	\$ 27.78	\$ 28.89	\$ 30.05	\$ 31.25	\$ 31.25	\$ 31.25	
Commercial Cardboard Rates							
2 CY 1X Per Week	\$ -	\$ 23.63	\$ 26.00	\$ 28.60	\$ 30.88	\$ 30.88	
4 CY 3x Per Week	\$ -	\$ 128.99	\$ 128.99	\$ 128.99	\$ 128.99	\$ 128.99	4

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 2

Year 1 2025 (Current)	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
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Note:

Commercial Rear-Load - Inside City Limits

Current Rates - FY 2025		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 42.97	\$ 85.94	\$ 128.98	\$ 171.90	\$ 214.87	\$ 257.97
	3	\$ 64.22	\$ 128.46	\$ 192.69	\$ 256.93	\$ 321.15	\$ 385.37
	4	\$ 85.94	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2026		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 47.27	\$ 94.53	\$ 139.30	\$ 185.65	\$ 232.06	\$ 278.61
	3	\$ 68.07	\$ 136.17	\$ 200.40	\$ 256.93	\$ 321.15	\$ 385.37
	4	\$ 89.38	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2027		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 51.99	\$ 103.99	\$ 150.44	\$ 200.50	\$ 250.62	\$ 300.90
	3	\$ 72.16	\$ 144.34	\$ 208.41	\$ 267.21	\$ 334.00	\$ 400.78
	4	\$ 92.95	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2028		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 57.19	\$ 114.39	\$ 162.48	\$ 216.54	\$ 270.67	\$ 324.97
	3	\$ 76.49	\$ 153.00	\$ 216.75	\$ 277.90	\$ 347.36	\$ 416.82
	4	\$ 96.67	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2029		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 61.77	\$ 123.54	\$ 175.48	\$ 233.87	\$ 292.33	\$ 350.97
	3	\$ 79.55	\$ 159.12	\$ 223.25	\$ 286.23	\$ 357.78	\$ 429.32
	4	\$ 99.57	\$ 177.06	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

Proposed Rates - FY 2030		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 61.77	\$ 123.54	\$ 175.48	\$ 233.87	\$ 292.33	\$ 350.97
	3	\$ 79.55	\$ 159.12	\$ 223.25	\$ 286.23	\$ 357.78	\$ 429.32
	4	\$ 99.57	\$ 177.06	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91

City of Stillwater, Oklahoma
Cost of Service and Rate Design Study
Proposed Rates- Scenario 2

Year 1 Year 2 Year 3 Year 4 Year 5 Year 6
2025 (Current) 2026 2027 2028 2029 2030

Note:**Commercial Rear-Load - Outside City Limits**

Current Rates - FY 2025		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 47.27	\$ 94.53	\$ 141.88	\$ 189.09	\$ 236.36	\$ 283.77
	3	\$ 70.64	\$ 141.31	\$ 211.96	\$ 282.62	\$ 353.27	\$ 423.91
	4	\$ 94.53	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2026		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 52.00	\$ 103.98	\$ 153.23	\$ 204.22	\$ 255.27	\$ 306.47
	3	\$ 74.88	\$ 149.79	\$ 220.44	\$ 282.62	\$ 353.27	\$ 423.91
	4	\$ 98.31	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2027		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 57.20	\$ 114.38	\$ 165.49	\$ 220.55	\$ 275.69	\$ 330.99
	3	\$ 79.37	\$ 158.78	\$ 229.26	\$ 293.92	\$ 367.40	\$ 440.87
	4	\$ 102.24	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2028		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 62.92	\$ 125.82	\$ 178.73	\$ 238.20	\$ 297.75	\$ 357.47
	3	\$ 84.13	\$ 168.30	\$ 238.43	\$ 305.68	\$ 382.10	\$ 458.50
	4	\$ 106.33	\$ 189.09	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2029		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 67.95	\$ 135.88	\$ 193.03	\$ 257.25	\$ 321.57	\$ 386.07
	3	\$ 87.50	\$ 175.03	\$ 245.58	\$ 314.85	\$ 393.56	\$ 472.26
	4	\$ 109.52	\$ 194.76	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Proposed Rates - FY 2030		Frequency of Collection					
Dumpster Size (Cubic Yards)		1x	2x	3x	4x	5x	6x
	2	\$ 67.95	\$ 135.88	\$ 193.03	\$ 257.25	\$ 321.57	\$ 386.07
	3	\$ 87.50	\$ 175.03	\$ 245.58	\$ 314.85	\$ 393.56	\$ 472.26
	4	\$ 109.52	\$ 194.76	\$ 283.77	\$ 378.16	\$ 472.70	\$ 567.50

Notes:

1. Disposal rate for roll-off and compactors customers is equal to the tonnage rate the City pays Republic starting in FY 2026.
2. Rates for all roll-off compactors, starting in FY 2026, include a fee per pull plus the actual cost of disposal.
3. The rates for cardboard roll-off are in the existing ordinance but have not been implemented (until FY 2026).
4. Rate is set at 50% of applicable MSW rate.

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Revenue Reconciliation - Scenario 2 Proposed Rates

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030	Note:
1	Residential							
2	Net Revenue Requirement	\$ 4,587,374	\$ 4,710,638	\$ 4,972,301	\$ 5,156,766	\$ 5,347,563	\$ 5,641,735	
3	Revenue							
4	Residential	\$ 3,967,128	\$ 4,167,071	\$ 4,545,441	\$ 4,910,493	\$ 5,257,173	\$ 5,601,008	
5	CCC Cardboard Baler Revenue/ Cost Savings		70,595	72,963	75,419	77,968	80,613	1
6	Discontinue 32-gal Cart Offering		9,373	15,336	21,891	29,296	37,282	1
7	Total Revenue	\$ 3,967,128	\$ 4,247,039	\$ 4,633,740	\$ 5,007,803	\$ 5,364,438	\$ 5,718,902	
8	Over/(Under)	\$ (620,246)	\$ (463,599)	\$ (338,561)	\$ (148,962)	\$ 16,875	\$ 77,167	
9	Cumulative Over/(Under)	(620,246)	(1,083,845)	(1,422,406)	(1,571,368)	(1,554,493)	(1,477,326)	
10	Commercial Rear Load							
11	Net Revenue Requirement - Refuse	\$ 2,307,658	\$ 2,498,693	\$ 2,588,534	\$ 2,687,948	\$ 2,790,852	\$ 2,931,459	
12	Net Revenue Requirement - Recycling	205,948	222,278	229,478	237,398	245,560	258,657	
13	Front-Load Implementation Costs					200,000	100,000	2
14	Revenue							
15	Commercial	\$ 1,527,558	\$ 1,566,483	\$ 1,640,152	\$ 1,720,540	\$ 1,804,928	\$ 1,852,117	
16	Apartment Resident Paying with Dumpster	729,738	766,517	836,117	903,266	967,037	1,030,284	
17	Shared Accounts	84,007	86,544	90,906	95,487	98,333	99,316	
18	MF Opt Out Fee	37,154	39,027	42,571	45,990	49,236	52,457	
19	Commercial Non-Subscription Fee	95,674	97,588	101,491	105,551	107,621	107,621	
20	Transition from Rear-Load to Front-Load Comm. Coll.	-	-	-	-	164,550	329,100	3
21	Commercial Dumpster	-	4,911	10,286	11,214	12,137	12,606	
22	Cardboard Roll-off	-	21,949	44,118	44,338	44,560	44,783	
23	Total Revenue	\$ 2,474,132	\$ 2,583,018	\$ 2,765,640	\$ 2,926,386	\$ 3,248,402	\$ 3,528,284	
24	Over/(Under)	\$ (39,474)	\$ (137,953)	\$ (52,373)	\$ 1,040	\$ 11,990	\$ 238,167	
25	Cumulative Over/(Under)	(39,474)	(177,427)	(229,800)	(228,760)	(216,769)	21,398	
26	Roll-Off (Charged Customers)							
27	Collection	\$ 185,838	\$ 192,863	\$ 198,930	\$ 205,470	\$ 212,183	\$ 223,399	
28	Disposal	69,532	73,217	77,098	81,184	85,487	90,017	
29	Net Revenue Requirement	\$ 255,370	\$ 266,080	\$ 276,028	\$ 286,654	\$ 297,669	\$ 313,416	
30	Revenue							
31	Other Revenues	\$ 34,730	\$ 35,602	\$ 37,211	\$ 38,893	\$ 40,651	\$ 42,488	4
32	Pull Fee Revenue	74,547	118,923	167,015	174,564	182,454	190,701	
33	Disposal Revenue	55,495	76,610	75,615	79,623	83,843	88,286	
34	Total Revenue	\$ 164,772	\$ 231,134	\$ 279,841	\$ 293,080	\$ 306,948	\$ 321,476	
35	Over/(Under)	\$ (90,599)	\$ (34,946)	\$ 3,813	\$ 6,426	\$ 9,279	\$ 8,060	
36	Cumulative Over/(Under)	(90,599)	(125,544)	(121,731)	(115,306)	(106,027)	(97,967)	
37	Street Sweeping							
38	Net Revenue Requirement	\$ 469,275	\$ 481,007	\$ 500,177	\$ 521,531	\$ 543,615	\$ 563,080	
39	Revenue	545,136	550,587	556,093	561,654	567,271	572,944	
40	Over/(Under)	\$ 75,861	\$ 69,581	\$ 55,916	\$ 40,123	\$ 23,655	\$ 9,864	
41	Cumulative Over/(Under)	75,861	145,442	201,358	241,481	265,137	275,001	
42	Total Revenue Requirement	\$ 7,825,626	\$ 8,178,696	\$ 8,566,518	\$ 8,890,296	\$ 9,425,259	\$ 9,808,348	
43	Total Revenues	\$ 7,151,168	\$ 7,611,779	\$ 8,235,314	\$ 8,788,923	\$ 9,487,058	\$ 10,141,606	
44	Total Over/(Under)	\$ (674,458)	\$ (566,917)	\$ (331,204)	\$ (101,373)	\$ 61,799	\$ 333,258	
45	Cumulative Over/(Under)	\$ (674,458)	\$ (1,241,375)	\$ (1,572,579)	\$ (1,673,952)	\$ (1,612,153)	\$ (1,278,895)	

City of Stillwater, Oklahoma
Solid Waste Cost of Service and Rate Design Study
Reserve Balance - Scenario 2 Proposed Rates

Line No.		Year 1 2025	Year 2 2026	Year 3 2027	Year 4 2028	Year 5 2029	Year 6 2030
Waste Management Restricted/Designated Fund							
1	Beginning Balance	\$ 2,746,708	\$ 1,872,250	\$ 605,333	\$ 249,129	\$ 147,756	\$ 209,555
2	Additions:						
3	Capital Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Reductions:						
5	Parking Lot	\$ -	\$ (500,000)	\$ -	\$ -	\$ -	\$ -
6	Transfer to Capital Replacement Reserve	\$ (200,000)	\$ (200,000)	\$ (25,000)	\$ -	\$ -	\$ -
7	Over/Under Recovery From Proposed Rates	\$ (674,458)	\$ (566,917)	\$ (331,204)	\$ (101,373)	\$ 61,799	\$ 333,258
8	Ending Balance	\$ 1,872,250	\$ 605,333	\$ 249,129	\$ 147,756	\$ 209,555	\$ 542,813
	Operating Reserve	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
	Total Fund Balance	\$ 2,872,250	\$ 1,605,333	\$ 1,249,129	\$ 1,147,756	\$ 1,209,555	\$ 1,542,813

Appendix B Benchmarking

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Solid Waste Benchmarking

	Stillwater	Denton	Waco	Little Rock	Charlottesville, VA
State	OK	TX	TX	AR	VA
Billing Frequency	Monthly	Monthly	Monthly	Monthly	Monthly
Residential					
Collection Frequency	Weekly	Weekly	Weekly	Weekly	Weekly
64 Gallon (Or Equivalent) Cart Rate	\$ 18.56	\$ 20.82			\$ 15.75
96 Gallon (Or Equivalent) Cart Rate	\$ 21.20	\$ 25.42	\$ 20.52	\$ 29.68	\$ 23.63
Additional Cart Rate	\$ 13.50	\$ 16.82	\$ 9.28	\$ 10.00	
Services Included In Rate	Trash, recycling, yard waste, glass manual collection, recycling collection center access, special collection.	Trash, recycling, bulky, cart maintenance and delivery, yard waste, curbside electronics, curbside HHW.	Automated refuse collection, automated recycling collection, brush and bulky.	Garbage collection, 4 bulky items per year, yard waste.	Trash, curbside recycling, access to recycling center.
Other Info					96 Gal decal. Annual Fee, converted to monthly above.
Curbside Recycling					
Included in Fee?	Yes	Yes	Yes	Yes	Yes
Collection Frequency	Weekly	Weekly	Weekly	Weekly	Weekly
Additional Fees					
Other Info					
Bulk					
Included in Fee?	No	Yes	Yes	Yes	No
Collection Frequency	By request/ call in.	Weekly, must call in to schedule.	Monthly	By request/ call in.	By request/ call in.
Limitations/Exclusions		More material than scheduled: \$25 per CY.	Size limit: 6x6x6.	First 4 pickups are free.	
Charge	\$20 per item.	2 bulky items free per week. Additional items at \$5 per item.		Additional pickups are \$25 per CY and \$10 for each CY above that.	First collection is \$35, second is \$50, all subsequent collections are \$100.
Yard Waste (Leaves/Brush)					
Included in Fee?	Yes	Yes	Yes	Yes	Yes
Collection Frequency	3x per month.	Weekly	2x per month.	Weekly	Loose Leaf up to 3x per season.
Collection Method	Bagged Curbside.	Paper bags or City issued cart. 4 CY of brush per week.	Bags, brush pile no larger than 4x4x4, green waste cart.	Leaves, grass, twigs must be boxed, bagged, or in cans smaller than 30 gallons placed curbside.	Curbside
Additional Fees					
Other Info	10 bag limit, under 35 lbs. Limbs < 4 feet in bundles no more than 18 inches across and less than 35 lbs.			Total weight not to exceed 50 pounds. Limbs less than 6 feet long, less than 6 inches in diameter.	Drop off for other yard waste.
Commercial					

	Stillwater	Denton	Waco	Little Rock	Charlottesville, VA
Average \$ per CY	\$ 4.95	\$ 5.79	\$ 5.89	Individualized Quote.	\$ 7.37
Additional Info	2, 3, and 4 CY containers up to 6x per week.	3, 4, 6, and 8 CY containers up to 6x per week.	3, 4, 6, 8, and 10 CY containers up to 6x per week.		2, 4, 6, and 8 CY containers 1 or 6x per week (applies to City facility contract).
Roll-Off					
Offered By the City?	Yes	Yes	Yes	No	No
Open Top					
Rental Fee	\$110 per month.	\$170 per month.	\$75 per 2 weeks.		
Pull Fee	\$ 330.00	\$ 300.00	\$ 350.00		
Disposal Fee		\$41.50 per ton	\$60 per ton		
Delivery Fee	\$ 100.00				
Other Fees					
Compactors					
Rental Fee	\$ 110.00				
Pull Fee		\$750 for 30 CY Self contained, \$950 for 42 CY stationary.	\$ 400.00		
Disposal Fee	\$46.91 per ton.				
Delivery Fee	\$ 100.00				
Other Fees			Compactors: monthly fee ranging from \$287 - \$867 for service 1-6x per week. Open top pack fees of \$240. Nonprofit roll-off fee of \$101.		
Additional Info		\$300 container service fee (per pull) is included in compactor pull fees listed above.	Pull rates above are for 20 CY. 10-40 CY available for MSW in \$50 increments. 20 - 40 CY available for compactors in \$80 increments.	Only offered for neighborhood clean-ups. Individuals and HOAs can request 20 CY roll-off. Individuals get one free roll-off delivery per year, HOAs get 8. Containers are placed for 3 days. Additional roll-offs are charged \$327.	Private companies offer this service, prices vary.
Landfill					
Operator	Republic	City	City	City	GFL - Transfer Station
Minimum Charge		\$ 26.50	\$ 10.00	\$ 40.00	
Gate Rate (per ton) - residents	\$38.17 for City.	\$ 45.50	\$ 52.00	\$ 55.00	\$ 62.00
Gate Rate (per ton) - non residents		\$ 49.50	\$ 75.00		
Additional Info			Residents may dispose of 1 ton 4x per year for free.		
Sources		Website Bulk Yard Waste Code	Bulk/Yard Waste Code	Solid Waste Fees Bulk/Yard Waste/ Roll-Off Code	Solid Waste Fees Brush/Bulky Landfill Code
Date Updated	2/12/2024	2/12/2024	2/12/2024	2/12/2024	2/12/2024

	Lawton	Bartlesville	Tulsa	Broken Arrow	Midwest City
State	OK	OK	OK	OK	OK
Billing Frequency	Monthly	Monthly	Monthly	Monthly	Monthly
Residential					
Collection Frequency	Weekly	Weekly	Weekly	Weekly	Weekly
64 Gallon (Or Equivalent) Cart Rate		\$ 18.00	\$ 21.12		\$ 17.38
96 Gallon (Or Equivalent) Cart Rate	\$ 21.60	\$ 20.00	\$ 23.40	\$ 24.25	\$ 20.27
Additional Cart Rate	\$ 6.10	\$ 9.00		\$ 7.50	\$ 8.56
Services Included In Rate	Trash, bulky.	Trash, recycling center access, yard waste, bulky via landfill.	Trash, recycling.	Trash, recycling, manual yard waste collection, recycling center access, 2x landfill vouchers for bulk items.	Trash, recycling, recycling site access, sharps program.
Other Info			Private hauler. Also offers twice per week premium service.		
Curbside Recycling					
Included in Fee?	No	No	Yes	Yes	Yes
Collection Frequency			Weekly	Weekly	Bi-Monthly
Additional Fees					
Other Info	Available for an additional fee.	Drop off center available.			
Bulk					
Included in Fee?	Yes	Yes	No	No	No
Collection Frequency	Monthly	Landfill drop off.	By request/ call in.	By request/ call in.	By request/ call in.
Limitations/Exclusions	Maximum of 8 CY, fee assessed beyond 4 CY.		Not to Exceed 8 CY.		Bulk should be no longer than 8 feet and 20 inches in diameter.
Charge	\$300 for first excess set out, second to \$500, then up to \$750. Hourly.	Free once per year at landfill via clean-up coupon program.	\$10 per 8 CY.	\$20 per yard with 2 yard min charge.	\$55 per 1/2 hour (residents), \$80 per 1/2 hour (for Landlords).
Yard Waste (Leaves/Brush)					
Included in Fee?	Yes	Yes	Yes	Yes	Yes
Collection Frequency	Weekly	2x per year.	Weekly	Weekly	Drop off.
Collection Method	Bagged Curbside & Leaf Vacuuming Service.	Bagged curbside.	In refuse carts, branch bundles, or clear bags.	Up to 20 clear bags (30 gal or less) and/or 4x4 tied bundles of green waste at curb.	
Additional Fees				\$5 per bag over 20 bags.	
Other Info					Citizens can dispose of green waste unlimited times per year at WRRF.
Commercial					

Solid Waste Benchmarking

	Lawton	Bartlesville	Tulsa	Broken Arrow	Midwest City
Average \$ per CY	\$ 4.82	\$ 8.92		N/A	\$ 4.36
Additional Info	1, 3, 4, 6, and 8 CY containers up to 7x per week.	2 and 3 CY containers up to 6x per week.	Provided directly through private contractors.		4, 6, and 8 CY containers up to 6x per week.
Roll-Off					
Offered By the City?	Yes	Yes	No	No	No
Open Top					
Rental Fee		\$10 per day.			
Pull Fee	\$ 237.80	\$ 228.00			
Disposal Fee	Up to 4 tons included	\$70 per ton			
Delivery Fee					
Other Fees					
Compactors					
Rental Fee	N/A				
Pull Fee	N/A	\$ 295.00			
Disposal Fee	N/A	\$70 per ton			
Delivery Fee	N/A				
Other Fees					
Additional Info	\$59.45 per ton, 4 ton minimum.	20 and 30 yard roll-offs are available.	Private companies offer this service, prices vary.	Private companies offer this service, prices vary.	Private companies offer this service, prices vary.
Landfill					
Operator	City	Waste Connections	City		WM
Minimum Charge	\$ 3.45	\$ 63.00	\$ 50.00		
Gate Rate (per ton) - residents	\$ 42.45	\$ 70.00	\$ 50.00		
Gate Rate (per ton) - non residents	\$ 75.75				
Additional Info					Residents are charged a discounted rate. Minimum for car or pickup is \$32.17, minimum for trailer is \$62.16
Sources	Solid Waste Fees Landfill Rates Code	Solid Waste Fees Bulk/ Yard Waste Landfill Rates Code	Solid Waste Fees Bulk Transfer Station Code	Solid Waste Fees Bulk Code	Solid Waste Fees Bulk Yard Waste Code
Date Updated	2/12/2024	2/12/2024	2/12/2024	2/12/2024	2/12/2024

	Edmond	Ponca City
State	OK	OK
Billing Frequency	Monthly	Monthly
Residential		
Collection Frequency	Weekly	2x Per Week
64 Gallon (Or Equivalent) Cart Rate		
96 Gallon (Or Equivalent) Cart Rate	\$ 16.93	\$ 21.56
Additional Cart Rate	\$ 7.00	
Services Included In Rate	Trash, recycling, curbside HHW, transfer station access.	Trash Collection, recycling site access, spring and fall yard waste collection.
Other Info		
Curbside Recycling		
Included in Fee?	Yes	No
Collection Frequency	Bi-Monthly	
Additional Fees		
Other Info	Contracted.	Drop off center available.
Bulk		
Included in Fee?	No	No
Collection Frequency	By request/ call in.	By request/ call in.
Limitations/Exclusions		
Charge	\$10 per CY for the first 2 CY, \$5 for each additional CY.	\$41.45 minimum charge.
Yard Waste (Leaves/Brush)		
Included in Fee?	No	Yes
Collection Frequency		2x per year.
Collection Method		Combination of 20 bags, cans, or bundles.
Additional Fees		Grass clippings as needed: \$8.55 or \$0.84 per bag, whichever is greater.
Other Info	Unable to locate info.	
Commercial		

	Edmond	Ponca City
Average \$ per CY	\$ 3.39	\$ 6.13
Additional Info	2, 4, 6, and 8 CY containers up to 6x per week.	2, 3, 4, and 7 CY containers up to 5x per week.
Roll-Off		
Offered By the City?	No	Yes
Open Top		
Rental Fee		\$ 199.02
Pull Fee		\$ 195.56
Disposal Fee		\$6.42 per CY
Delivery Fee		
Other Fees		
Compactors		
Rental Fee		
Pull Fee		\$ 195.56
Disposal Fee		\$9.81 per CY
Delivery Fee		
Other Fees		
Additional Info	Private companies offer this service, prices vary.	Two pulls minimum per month, or minimum charge above applies. Front unloading compactors are charged \$72.25 per pull.
Landfill		
Operator	City - Transfer Station	City
Minimum Charge		\$ 19.14
Gate Rate (per ton) - residents	\$ 52.00	\$ 49.62
Gate Rate (per ton) - non residents		
Additional Info		
Sources	Solid Waste Fees Bulk Code	Solid Waste Fees Code
Date Updated	2/12/2024	2/12/2024

Fee Description	2026	2027	2028	2029	2030
Street Sweeper Service					
Street Sweeper	\$2.33	\$2.33	\$2.33	\$2.33	\$2.33
Residential Collection					
Inside City Limits					
(1) 35 Gallon Cart	\$17.36	\$18.75	\$20.07	\$21.27	\$22.33
(1) 48 Gallon Cart (no longer offered to new customers)	\$18.79	\$20.29	\$21.72	\$23.02	\$24.17
(1) 64 Gallon Cart	\$20.23	\$21.85	\$23.38	\$24.78	\$26.02
(2) 64 Gallon Carts (no longer offered to new customers)	\$33.88	\$36.50	\$39.06	\$41.40	\$43.47
(1) 96 Gallon Cart	\$23.11	\$24.96	\$26.70	\$28.31	\$29.72
(2) 96 Gallon Carts	\$37.82	\$40.85	\$43.71	\$46.33	\$48.65
(1) 96 Gallon Cart (paid house side service)	\$35.17	\$37.99	\$40.65	\$43.09	\$45.24
Outside City Limits					
(1) 35 Gallon Cart	\$37.32	\$40.31	\$43.13	\$45.72	\$48.00
(1) 64 Gallon Cart	\$38.74	\$41.84	\$44.77	\$47.45	\$49.82
(1) 96 Gallon Cart	\$41.63	\$44.96	\$48.10	\$50.99	\$53.54
(2) 96 Gallon Carts	\$56.34	\$60.85	\$65.11	\$69.02	\$72.47
Other Residential Services					
Poly-Cart Cleaning/Exchange Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Poly-Cart Replacement Fee	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Residential Extra Dump (per cart)	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Non-payment delivery fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Non-payment pick-up fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Multi-Family Residential Collection					
Inside City Limits (per unit)	\$18.67	\$20.17	\$21.58	\$22.87	\$24.02
Multi-Family Residential Non-Subscription Fee	\$2.99	\$3.23	\$3.45	\$3.66	\$3.84
Bulk Collection Service					
Bulk Collection (per item)	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
Special Collection Fee (per 2 cubic yards)	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
Move-in / Move-out Clean-up (20 bagged or boxed items 2x per year)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Roll-off Container Service					
Inside City Limits					
Delivery Fee	\$104.00	\$108.16	\$112.49	\$116.99	\$121.67
Rental Fee	\$104.00	\$108.16	\$112.49	\$116.99	\$121.67
Non-use rental fee	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Pull Fee	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Disposal fee (per ton)	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22
Compactor Service - Pull Fee	\$300.00	\$312.00	\$324.48	\$337.46	\$350.96
Compactor Service - disposal fee (per ton)	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22
Compactor Service - Reversal Fee	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00
Outside City Limits					
Delivery Fee	\$114.40	\$118.98	\$123.74	\$128.68	\$133.83
Rental Fee	\$114.40	\$118.98	\$123.74	\$128.68	\$133.83
Non-use rental fee	\$335.00	\$348.40	\$362.34	\$376.83	\$391.90
Pull Fee	\$335.00	\$348.40	\$362.34	\$376.83	\$391.90
Disposal fee (per ton)	\$42.93	\$44.65	\$46.43	\$48.29	\$50.22

Fee Description	2026	2027	2028	2029	2030
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Commercial Collection

Inside City Limits

2-yard X 1 day Per Week	\$47.27	\$51.99	\$57.19	\$62.91	\$69.20
2-yard X 2 day Per Week	\$94.53	\$103.99	\$114.39	\$125.82	\$138.40
2-yard X 3 day Per Week	\$139.30	\$150.44	\$162.48	\$175.48	\$189.52
2-yard X 4 day Per Week	\$185.65	\$200.50	\$216.54	\$233.87	\$252.58
2-yard X 5 day Per Week	\$232.06	\$250.62	\$270.67	\$292.33	\$315.72
2-yard X 6 day Per Week	\$278.61	\$300.90	\$324.97	\$350.97	\$379.05
3-yard X 1 day Per Week (no longer offered to new customers)	\$68.07	\$72.16	\$76.49	\$81.08	\$85.94
3-yard X 2 day Per Week (no longer offered to new customers)	\$136.17	\$144.34	\$153.00	\$162.18	\$171.91
3-yard X 3 day Per Week (no longer offered to new customers)	\$200.40	\$208.41	\$216.75	\$225.42	\$234.44
3-yard X 4 day Per Week (no longer offered to new customers)	\$256.93	\$267.21	\$277.90	\$289.01	\$300.57
3-yard X 5 day Per Week (no longer offered to new customers)	\$321.15	\$334.00	\$347.36	\$361.25	\$375.70
3-yard X 6 day Per Week (no longer offered to new customers)	\$385.37	\$400.78	\$416.82	\$433.49	\$450.83
4-yard X 1 day Per Week	\$89.38	\$92.95	\$96.67	\$99.57	\$102.56
4-yard X 2 day Per Week	\$171.90	\$171.90	\$171.90	\$177.06	\$182.37
4-yard X 3 day Per Week	\$257.97	\$257.97	\$257.97	\$257.97	\$257.97
4-yard X 4 day Per Week	\$343.78	\$343.78	\$343.78	\$343.78	\$343.78
4-yard X 5 day Per Week	\$429.73	\$429.73	\$429.73	\$429.73	\$429.73
4-yard X 6 day Per Week	\$515.91	\$515.91	\$515.91	\$515.91	\$515.91
Downtown Dumpster Fee	\$40.57	\$43.82	\$47.32	\$51.11	\$55.20
Shared Dumpster Fee	\$28.89	\$30.05	\$31.25	\$32.50	\$33.80

Outside City Limits

2-yard X 1 day Per Week	\$52.00	\$57.20	\$62.92	\$69.21	\$76.13
2-yard X 2 day Per Week	\$103.98	\$114.38	\$125.82	\$138.40	\$152.24
2-yard X 3 day Per Week	\$153.23	\$165.49	\$178.73	\$193.03	\$208.47
2-yard X 4 day Per Week	\$204.22	\$220.55	\$238.20	\$257.25	\$277.83
2-yard X 5 day Per Week	\$255.27	\$275.69	\$297.75	\$321.57	\$347.30
2-yard X 6 day Per Week	\$306.47	\$330.99	\$357.47	\$386.07	\$416.96
3-yard X 1 day Per Week (no longer offered to new customers)	\$74.88	\$79.37	\$84.13	\$89.18	\$94.53
3-yard X 2 day Per Week (no longer offered to new customers)	\$149.79	\$158.78	\$168.30	\$178.40	\$189.10
3-yard X 3 day Per Week (no longer offered to new customers)	\$220.44	\$229.26	\$238.43	\$247.96	\$257.88
3-yard X 4 day Per Week (no longer offered to new customers)	\$282.62	\$293.92	\$305.68	\$317.91	\$330.63
3-yard X 5 day Per Week (no longer offered to new customers)	\$353.27	\$367.40	\$382.10	\$397.38	\$413.28
3-yard X 6 day Per Week (no longer offered to new customers)	\$423.91	\$440.87	\$458.50	\$476.84	\$495.91
4-yard X 1 day Per Week	\$98.31	\$102.24	\$106.33	\$109.52	\$112.81
4-yard X 2 day Per Week	\$189.09	\$189.09	\$189.09	\$194.76	\$200.60
4-yard X 3 day Per Week	\$283.77	\$283.77	\$283.77	\$283.77	\$283.77
4-yard X 4 day Per Week	\$378.16	\$378.16	\$378.16	\$378.16	\$378.16
4-yard X 5 day Per Week	\$472.70	\$472.70	\$472.70	\$472.70	\$472.70
4-yard X 6 day Per Week	\$567.50	\$567.50	\$567.50	\$567.50	\$567.50

Fee Description	2026	2027	2028	2029	2030
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Commercial Collection

Other Commercial Services

Non-Subscription Fee	\$28.89	\$30.05	\$31.25	\$32.50	\$33.80
Commercial Extra Dump	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Commercial Poly-Cart Service (96 gal only)	\$23.11	\$24.96	\$26.70	\$28.31	\$29.72
Cardboard Collection 20 yard / Open Top Roll-off	\$195.00	\$195.00	\$195.00	\$195.00	\$195.00
Cardboard Collection 30 yard / Open Top Roll-off	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
Cardboard Collection 2-yard X 1 day Per Week	\$23.63	\$26.00	\$28.60	\$30.88	\$30.88
Cardboard Collection 4-yard X 3 day Per Week	\$128.99	\$128.99	\$128.99	\$128.99	\$128.99

Convenience Collection Center

Motor Oil Fee (per qt)	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Anti-Freeze (per gal)	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
35 Gallon Garbage Bag Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Small Furniture Item Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Medium Furniture item Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Large Furniture Item Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Small Electronic Item Fee	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Medium Electronic Item Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Large Electronic Item Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Compact Fluorescent Bulb Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Fluorescent Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Any Size T.V. or Monitor Fee	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
1 Gallon of Latex Paint Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
5 Gallons of Latex Paint Fee	\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Small Wood Load Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Medium Wood Load Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Large Wood Load Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Bagged Carpet Fee	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Small Carpet Load Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Medium Carpet Load Fee	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Large Carpet Load Fee	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Extra-Large Carpet Load Fee	\$25.00	\$25.00	\$25.00	\$25.00	\$25.00
Any Size Mattress Fee	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
City of Stillwater Blue Bags (5 pack)	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
City of Stillwater Blue Bags (case for retailers)	\$256.00	\$256.00	\$256.00	\$256.00	\$256.00

Waste Management

WASTE AND RECYCLING RATES



Overview

- NewGen Strategies and Solutions LLC Final Report
- Operational Assessment
- Solid Waste Cost of Service and Rate Design
- Staff Recommendations for Waste and Recycling Rates

NewGen Strategies Final Report

- NewGen Strategies and Solutions LLC presented an executive summary of there Final Report on June 16, 2025.
- The report included:
 - Operational assessment
 - Analysis of the forecasted costs of providing solid waste services.
 - Recommendations for recovering those costs over the next five years.

Operational Assessment

- Residential

- Waste
- Recycling
- Cart maintenance
- Yard waste
- Glass
- Bulky
- C.C.C
- Events
- Disposal
- Recycling Processing
- Administration

- Commercial

- Waste
- Recycling
- Dumpster Maintenance
- Disposal
- Recycling Processing
- Administration

- Roll-off

- Waste
- Recycling
- Dumpster Maintenance
- Disposal
- Recycling Processing
- Administration

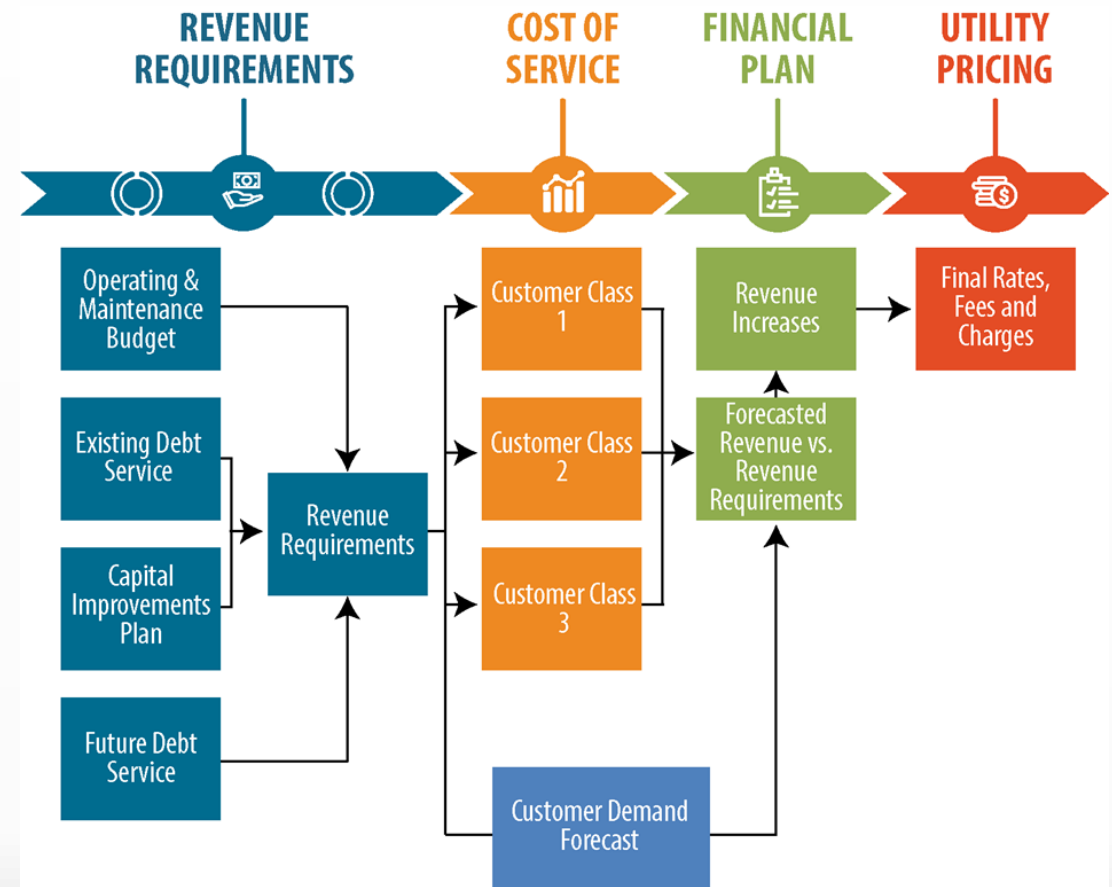
- Street Sweeper

- Sweeping
- Disposal
- Administration

Cost of Service and Rate Design

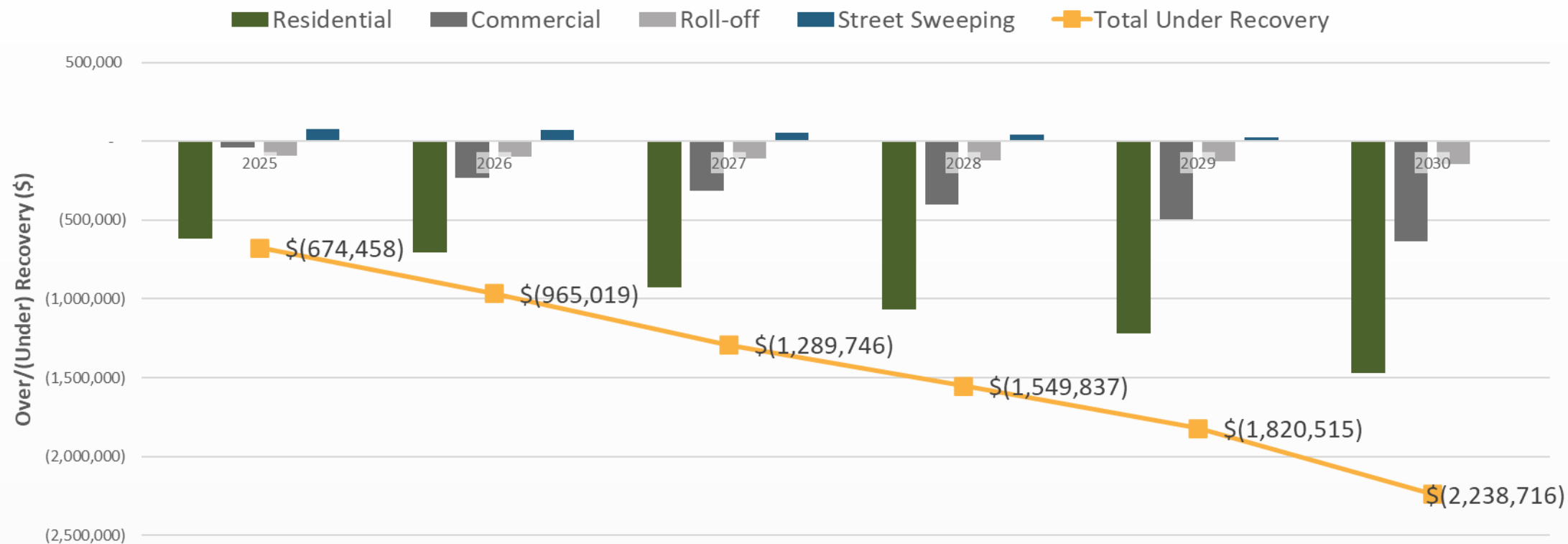
Cost of Service Methodology

- Development of the “Test Year”
- Development of the revenue requirement forecast
- Allocation of costs to service categories
- Allocation to customer classes
- Determination of billing units
- Calculation of the cost of service
- Rate design



Cost of Service and Rate Design

Current Rates Over/(Under) Recovery per customer class



	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Fund Balance	\$2,872,250	\$1,207,231	\$(107,515)	\$(1,657,352)	\$(3,447,867)	\$(5,617,583)
Minimum Fund Balance	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000

Cost of Service and Rate Design

Current Challenges in the Solid Waste Industry

Equipment

- Supply Chain
- Price of Steel



*Cities need more time for
vehicle delivery*

Staffing

- High Demand
for CDL Drivers



*CDL driver shortage
nationwide*

Inflation

- Fuel Volatility



*Inflation impacting cost
of everything*

Cost of Service and Rate Design

Current Challenges For the City of Stillwater

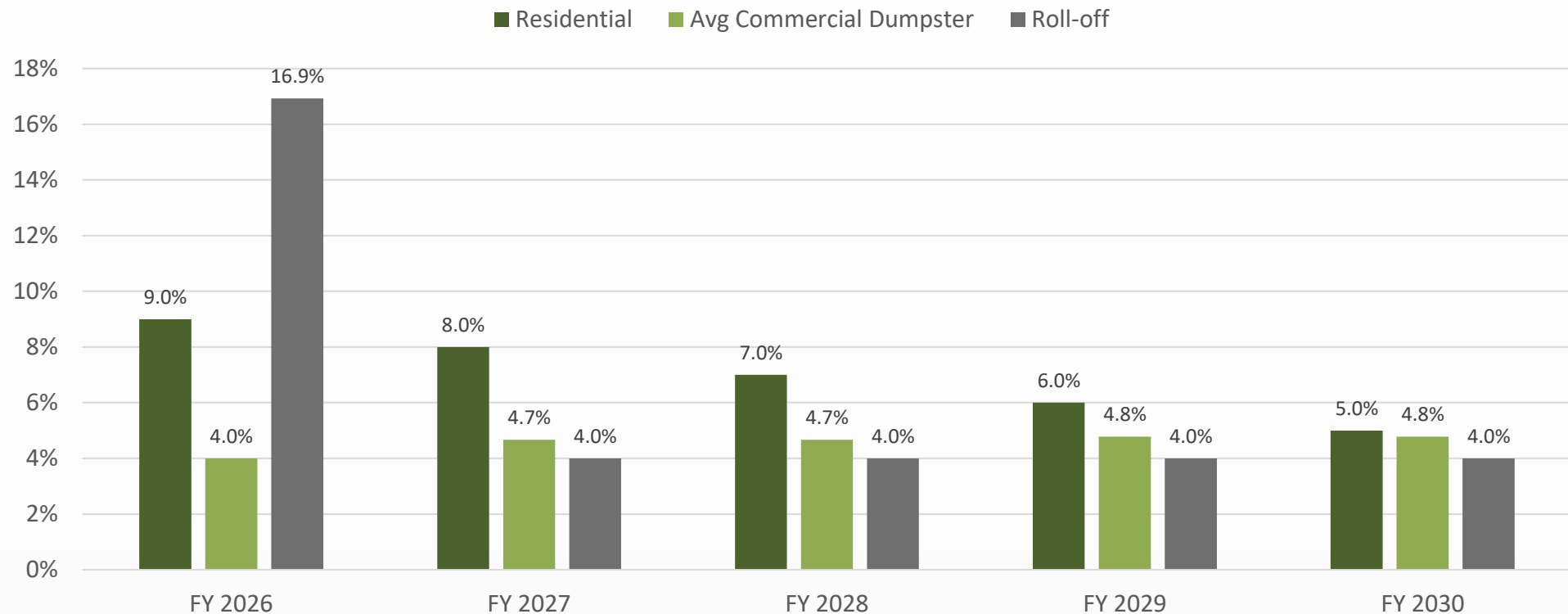
Metric	Avg Annual Increase
CPI – All Urban Consumers	4.20%
CPI – Garbage and Trash	5.00%
PPI – Solid Waste Collection	5.70%
Equipment Purchases	
Automated Side Loaders	16.00%
Rear-Loaders	7.10%
Roll-off Vehicles	11.00%
Street Sweepers	8.30%

Cost of Service and Rate Design

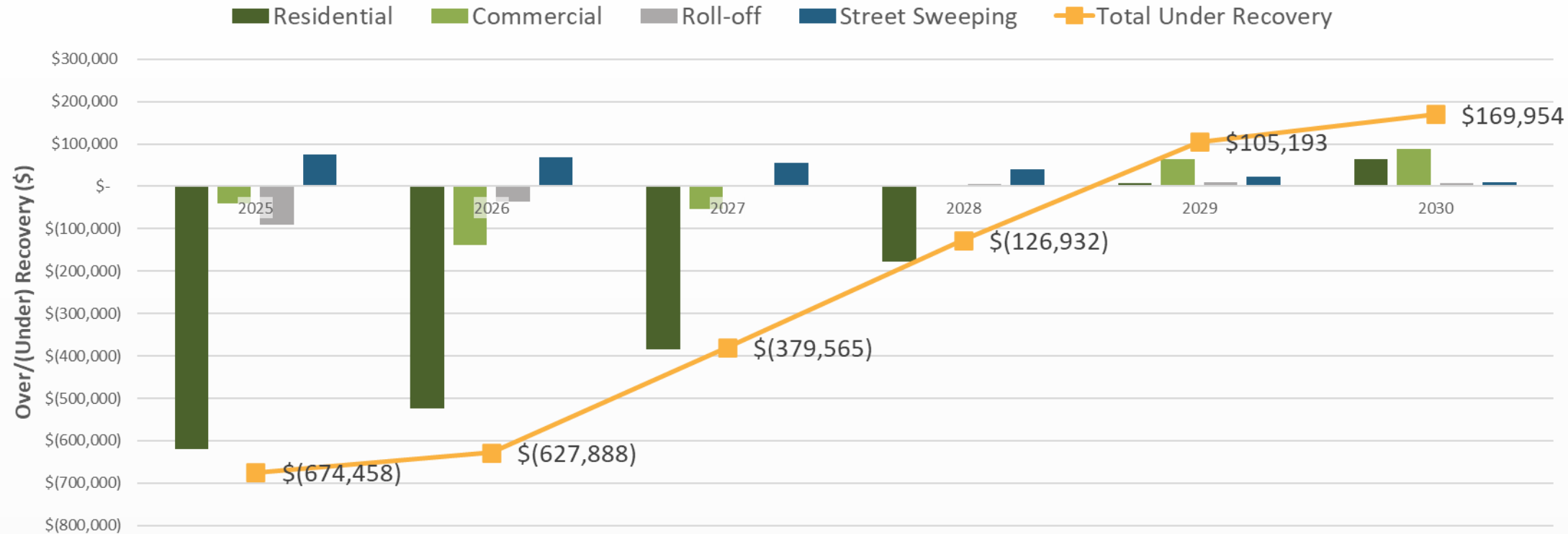
NewGen Strategies & Solutions Recommended Rate Adjustments

- Apply a percentage increase to existing rate
- Change the rate mechanism to charge differently than the current rate
 - (Example) Shift commercial dumpster rates to better align with the cost of service.

Cost of Service and Rate Design



Cost of Service and Rate Design



	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
Fund Balance	\$2,872,250	\$1,544,361	\$1,139,796	\$1,012,864	\$1,118,058	\$1,288,012
Minimum Fund Balance	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000

Cost of Service and Rate Design

Rate examples

Fee Description	Current	Jan 1, 2026			Jan 1, 2027			Jan 1, 2028			Jan 1, 2029			Jan 1, 2030		
	Rate	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -
Residential Collection																
(1) 35 Gallon Cart	\$15.93	\$17.36	9%	\$1.43	\$18.75	8%	\$1.39	\$20.07	7%	\$1.32	\$21.27	6%	\$1.20	\$22.33	5%	\$1.06
(1) 64 Gallon Cart	\$18.56	\$20.23	9%	\$1.67	\$21.85	8%	\$1.62	\$23.38	7%	\$1.53	\$24.78	6%	\$1.40	\$26.02	5%	\$1.24
(1) 96 Gallon Cart	\$21.20	\$23.11	9%	\$1.91	\$24.96	8%	\$1.85	\$26.70	7%	\$1.74	\$28.31	6%	\$1.61	\$29.72	5%	\$1.41
Multi-Family Residential Collection																
Multi-Family Residential	\$17.13	\$18.67	9%	\$1.54	\$20.17	8%	\$1.50	\$21.58	7%	\$1.41	\$22.87	6%	\$1.29	\$24.02	5%	\$1.15
Bulk Collection Service																
Bulk Collection (per item)	\$20.00	\$25.00	25%	\$5.00												

Cost of Service and Rate Design

Rate examples

Fee Description	Current	Jan 1, 2026			Jan 1, 2027			Jan 1, 2028			Jan 1, 2029			Jan 1, 2030		
	Rate	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -
Commercial Collection																
2-yard X 1 day Per Week	\$42.97	\$47.27	10%	\$4.30	\$51.99	10%	\$4.72	\$57.19	10%	\$5.20	\$62.91	10%	\$5.72	\$69.20	10%	\$6.29
2-yard X 6 day Per Week	\$257.97	\$278.61	8%	\$20.64	\$300.90	8%	\$22.29	\$324.97	8%	\$24.07	\$350.97	8%	\$26.00	\$379.05	8%	\$28.08
4-yard X 1 day Per Week	\$85.94	\$89.38	4%	\$3.44	\$92.95	4%	\$3.57	\$96.67	4%	\$3.72	\$99.57	3%	\$2.90	\$102.56	3%	\$2.99
4-yard X 6 day Per Week	\$515.91	\$515.91	0%	\$0.00	\$515.91	0%	\$0.00	\$515.91	0%	\$0.00	\$515.91	0%	\$0.00	\$515.91	0%	\$0.00
Downtown Dumpster Fee	\$0.00	\$40.57			\$43.82	10%	\$3.25	\$47.32	10%	\$3.50	\$51.11	10%	\$3.79	\$55.20	10%	\$4.09
Cardboard 2-yard X 1 day Per Week	\$0.00	\$23.63			\$26.00	10%	\$2.37	\$28.60	10%	\$2.60	\$30.88	8%	\$2.28	\$30.88	0%	\$0.00

Cost of Service and Rate Design

Rate examples

Fee Description	Current	Jan 1, 2026			Jan 1, 2027			Jan 1, 2028			Jan 1, 2029			Jan 1, 2030		
	Rate	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -	Rate	%	+ / -
Roll-off Container Service																
Delivery Fee	\$100.00	\$104.00	4%	\$4.00	\$108.16	4%	\$4.16	\$112.49	4%	\$4.33	\$116.99	4%	\$4.50	\$121.67	4%	\$4.68
Rental Fee	\$100.00	\$104.00	4%	\$4.00	\$108.16	4%	\$4.16	\$112.49	4%	\$4.33	\$116.99	4%	\$4.50	\$121.67	4%	\$4.68
Non-use rental fee	\$0.00	\$300.00			\$312.00	4%	\$12.00	\$324.48	4%	\$12.48	\$337.46	4%	\$12.98	\$350.96	4%	\$13.50
Pull Fee	\$330.00	\$300.00	-9%	-\$30.00	\$312.00	4%	\$12.00	\$324.48	4%	\$12.48	\$337.46	4%	\$12.98	\$350.96	4%	\$13.50
Disposal fee (per ton)	\$0.00	\$42.93			\$44.65	4%	\$1.72	\$46.43	4%	\$1.78	\$48.29	4%	\$1.86	\$50.22	4%	\$1.93

Cost of Service and Rate Design

Rate examples

Fee Description	Current	Jan 1, 2026		
	Rate	Rate	%	+ / -
Convenience Collection Center				
Motor Oil Fee (per qt)	\$0.20	\$0.25	25%	\$0.05
Anti-Freeze (per gal)	\$0.00	\$1.50	150%	\$1.50
35 Gallon Garbage Bag Fee	\$1.50	\$2.00	33%	\$0.50
Small Furniture Item Fee	\$5.00	\$10.00	100%	\$5.00
Medium Furniture item Fee	\$10.00	\$15.00	50%	\$5.00
Large Furniture Item Fee	\$15.00	\$20.00	33%	\$5.00
City of Stillwater Blue Bags (5 pack)	\$7.50	\$10.00	33%	\$2.50

Questions?

Staff Recommendations for Waste and Recycling Rates

- Staff recommends the adoption of resolution.

Waste Management

WASTE AND RECYCLING RATES



ORDINANCE NO. 3576

AN ORDINANCE REZONING A TRACT OF LAND LOCATED AT 320 S WALNUT STREET FROM SMALL LOT SINGLE-FAMILY RESIDENTIAL (RSS) TO TWO-FAMILY RESIDENTIAL (RT).

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF STILLWATER, OKLAHOMA:

Parcels located at 320 S WALNUT STREET:

Classen Heights Addition, Block 4 Lots 22-25

be and the same is hereby rezoned from RSS (SMALL LOT SINGLE-FAMILY RESIDENTIAL) to RT (TWO-FAMILY RESIDENTIAL).

PASSED, APPROVED, AND ADOPTED THIS ____ DAY OF _____, 2025.

WILLIAM H. JOYCE, MAYOR

(SEAL)
ATTEST:

TERESA KADAVY, CITY CLERK

APPROVED AS TO FORM AND LEGALITY THIS ____ DAY OF _____, 2025.

TAMMY EWING, ASSISTANT CITY ATTORNEY

First Reading: 07/21/2025
Second Reading:

ORDINANCE NO. 3578

AN ORDINANCE REZONING A TRACT OF LAND LOCATED AT 624 W. 22ND AVENUE FROM SMALL LOT SINGLE-FAMILY RESIDENTIAL (RSS) and AGRICULTURE (A) TO AGRICULTURE (A).

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF STILLWATER, OKLAHOMA:

Parcels located at 624 W. 22ND AVENUE:

A TRACT OF LAND IN THE NORTHWEST QUARTER (NW/4) OF THE NORTHWEST QUARTER (NW/4) OF SECTION TWENTY-SIX (26), TOWNSHIP NINETEEN (19) NORTH, RANGE TWO (2) EAST OF THE INDIAN MERIDIAN, PAYNE COUNTY, STATE OF OKLAHOMA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: STARTING AT THE NORTHWEST CORNER (NW/COR) OF SAID NORTHWEST QUARTER (NW/4); THENCE SOUTH 89°54' EAST, ALONG THE NORTH LINE OF THE NORTHWEST QUARTER (NW/4), 825.0 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 0°02' WEST, 1271.0 FEET; THENCE NORTH 87°47' EAST, 518.0 FEET; THENCE NORTH 0°06' WEST, 1250 FEET TO THE NORTHEAST CORNER (NE/COR) OF THE NORTHWEST QUARTER (NW/4) OF THE NORTHWEST QUARTER (NW/4) OF SAID SECTION TWENTY-SIX (26); THENCE NORTH 89° 54' WEST, ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER (NW/4) 514.6 FEET TO THE POINT OF BEGINNING.

be and the same is hereby rezoned from RSS (SMALL LOT SINGLE-FAMILY RESIDENTIAL) and A (AGRICULTURE) to A (AGRICULTURE).

PASSED, APPROVED, AND ADOPTED THIS 8TH DAY OF SEPTEMBER, 2025.

WILLIAM H. JOYCE, MAYOR

(SEAL)
ATTEST:

TERESA KADAVY, CITY CLERK

APPROVED AS TO FORM AND LEGALITY THIS 8TH DAY OF SEPTEMBER, 2025.

TAMMY EWING, ASSISTANT CITY ATTORNEY

First Reading: 08/18/2025
Second Reading: 09/08/2025

ORDINANCE NO. 3579

AN ORDINANCE CLOSING A PORTION OF A GENERAL UTILITY
EASEMENT LOCATED AT 707 E. AIRPORT ROAD.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF STILLWATER,
OKLAHOMA:

Parcel located at 707 E. AIRPORT ROAD:

NORTH 227.5 FEET OF THE 30 FOOT GENERAL UTILITY EASEMENT
MORE PARTICULARLY DESCRIBED IN BOOK 2491, PAGE 602, and attached
hereto as Exhibit A.

is not presently in use and is hereby closed. The City reserves the right to reopen this right of way in the event it is
needed in the future, without the necessity to pay the owner or their successors for the reopening of this right of way.

PASSED, APPROVED, AND ADOPTED THIS 8TH DAY OF SEPTEMBER, 2025.

WILLIAM H. JOYCE, MAYOR

(SEAL)
ATTEST:

TERESA KADAVY, CITY CLERK

APPROVED AS TO FORM AND LEGALITY THIS 8TH DAY OF SEPTEMBER, 2025.

TAMMY EWING, ASSISTANT CITY ATTORNEY

First Reading: 08/18/2025
Second Reading: 09/08/2025

Exhibit A

Easement Closure Area Outlined in Orange

