



City of Broken Arrow
Minutes
Drainage Advisory Committee

City Hall
220 S 1st Street
Broken Arrow OK
74012

Chair Lori Hendricks
Vice Chair Denise Mason
Member Amber Hamilton
Member Johnnie Parks
Member Donna Wallace
Member Donna Wiedower
Member David Pickel

Monday, April 28, 2025

Time 6:00 p.m.

Council Chambers

1. Call to Order

Chair Lori Hendricks called the meeting to order at 6:00 p.m.

2. Roll Call

Present: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

3. Consideration of Consent Agenda

A. 25-583 Approval of Drainage Advisory Committee meeting minutes of January 27th, 2025

MOTION: A motion was made by Donna Wallace, seconded by Denise Mason

Move to Approve Item 25-583 Drainage Advisory Committee meeting minutes of January 27th, 2025

The motion carried by the following vote:

Aye: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

4. Consideration of Items Removed from Consent Agenda - NONE

5. Presentations - NONE

6. General Committee Business

A. 25-589 Consideration, discussion, and possible action to recommend to Council to expend funds to construct improved channelization measures along the banks of a tributary to Covington Creek contingent upon all adjacent property owners agreement and execution of a drainage easement for the construction of the project (Case No. 25-005)

Patrick Wilson, Stormwater Division Manager, provided an update on a long-standing drainage project initially introduced in July 2020 for design funding, with additional funds requested in February 2022 to pursue an individual Army Corps permit due to the project's location in a blue line channel and FEMA floodplain. The plans are now 98% complete, with only minor adjustments pending based on resident input. After a two-year permitting process involving coordination across city and county jurisdictions, the Army Corps permit was officially approved, with final signatures from both the City of Broken Arrow and the Corps completed in April 2025.

Mr. Wilson gave further updates on the Covington Creek tributary drainage project, initially proposed in 2020 and now nearing 98% design completion. Following a public meeting on March 20, 2025, with Forest Ridge HOA and nearby residents, all attendees expressed support. However, three landowners were absent—two have been contacted, one agreed verbally, and efforts continue to reach the third. The project spans both the City of Broken Arrow and Wagner County jurisdictions, requiring cross-boundary permitting and new drainage easements. The area suffers from severe erosion, threatening infrastructure, including utility poles, with bank degradation reaching up to 13 feet deep. Planned improvements include reshaping and widening the channel to reduce flow velocity, reinforced with riprap in high-velocity zones. While complete mitigation of 100-year flood events isn't feasible, the improvements will significantly reduce low-level flooding and protect critical infrastructure. The \$1.2 million project is proposed as a public-private partnership, with the Forest Ridge HOA covering the remainder beyond the city's \$500,000 request. Staff recommends approval contingent on all

affected property owners signing necessary easements.

The committee discussed the complexities of the Covington Creek drainage project, including jurisdictional challenges, historical alterations to the creek's path, and shared financial responsibility. The project area lies on private property in Wagner County, which is not legally authorized to fund off-road drainage improvements. While most affected residents and Forest Ridge HOA previously expressed support, their absence at this meeting raised concerns about long-term commitment. Still, staff confirmed the HOA is contributing over 50% of the project cost and that all final agreements, including easements and hold harmless clauses, will be secured before any city funds are spent. The erosion threatens city infrastructure and utility lines, and the Army Corps has approved an individual Section 404 permit valid for five years. Legal counsel confirmed the city could include liability protections and historical context in the agreement to avoid future blame. The original creek was likely realigned without proper oversight in 1976, and while the Corps now recognizes the current channel as the official waterway, rechanneling is no longer permitted. A lawsuit between Forest Ridge HOA and seven Wagner County residents over channel maintenance is ongoing, and any agreement must include the resolution of that dispute. The committee expressed support for the project, contingent on the complete execution of legal contracts and documentation from all parties involved.

MOTION: A motion was made by Lori Hendricks, seconded by Johnnie Parks
Move to Approve Item 25-589 recommend to Council to expend funds to construct improved channelization measures along the banks of a tributary to Covington Creek contingent upon all adjacent property owners agreement and execution of a drainage easement for the construction of the project (Case No. 25-005)

The motion carried by the following vote:

Aye: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

B. 25-596 Consideration, discussion, and possible action to recommend to City Council to expend funds to construct erosion mitigation and repair the leaking pond spillway at Shenandoah Valley at Battle Creek(Case No 25-009)

Patrick Wilson, Stormwater Division Manager, reviewed a project originally brought to the Drainage Advisory Committee in August 2022 to investigate a leaking spillway over a 10-inch city sanitary sewer line. After the city completed the study, the Property Owners Association used it to fund the design plans. In October 2024, \$45,000 was approved for construction, but a recent bid opening on April 15, 2025, showed higher costs due to the project's specialized nature and inflation, prompting a request for an additional \$32,000. The project, located east of Aspen and north of Omaha, involves injecting polyurethane around the spillway to stop water seepage that is saturating the soil and threatening the underlying sewer line. Staff recommends the committee support the additional funding to protect the city's infrastructure and proceed with the planned summer 2025 construction.

Mr. Wilson and the committee reviewed details of the proposed repair to a leaking spillway located above a city sanitary sewer line in a privately owned pond. Patrick Wilson confirmed the spillway likely did not leak initially but now suffers from saturation and possible soil movement due to improper compaction or poor clay quality at installation. The proposed solution—injecting polyurethane around the spillway—was one of several options identified in the engineering study, with a complete reconstruction estimated at over \$1 million. The city and the Property Owners Association agreed the injection method offers practical and cost-effective mitigation. The total cost rose to \$77,000 due to site constraints requiring smaller, more specialized equipment, and only one qualified bid was received due to the project's complexity. The city has needed bonding, including performance, warranty, and maintenance bonds, to ensure contractor accountability. While the solution cannot eliminate all risks, staff affirmed that the seepage has historically been limited to the exact location and that surrounding soil remains stable. Any agreement will clarify that the city's role is limited to mitigation, and liability for future issues remains with the Property Owners Association. The town can also request a partial pond drawdown during construction to ease pressure on the spillway and improve repair success.

MOTION: A motion was made by Johnnie Parks, seconded by Donna Mason
Move to Approve Item 25-596 recommend to City Council to expend funds to construct erosion mitigation and repair the leaking pond spillway at Shenandoah Valley at Battle Creek(Case No 25-009)

The motion carried by the following vote:

Aye: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

C. 25-599 Consideration, discussion, and possible action to recommend to City Council to expend funds to construct erosion mitigation downstream of an outlet structure at 215 S Laurel

Avenue (Case No. 25-007)

Patrick Wilson, Stormwater Division Manager, presented a request for construction funding to address erosion issues at a city stormwater outfall in the Stone Mill Bridge subdivision, located south of Kenosha and east of Olive Street. The Drainage Advisory Committee first reviewed the project in February 2024, and the council previously approved funding for the design, which is now 98% complete. The area features a pond and a city storm sewer system that discharge into Olive Creek, with erosion observed downstream, particularly after recent heavy rain events. The proposed solution includes constructing a stilling basin to reduce flow velocity from 20 to 11 feet per second and regrading the area, which will involve work on neighboring properties. The city has communicated with adjacent property owners who are currently cooperative. The project may involve minor floodplain work, and all necessary permits will be obtained. Staff recommends the committee support the project and forward it to the city council for approval.

Mr. Wilson confirmed that erosion at the outfall is due to high water velocity, which was initially calculated at 11 feet per second but is actually reaching 20 feet per second. The proposed solution, including a stilling basin and riprap, will reduce the velocity to 4 feet per second—well below the 6 feet per second threshold at which the soil becomes erodible—providing adequate protection for most flood events. The project is located in the Hakey Creek Basin. While funds from the 2018 bond package have not yet been sold, \$2.5 million remains to be issued, likely in October, with sufficient funding expected by the start of the next fiscal year on July 1. A 30% contingency has been included to account for cost increases. The impacted area includes about half an acre on the east side, for which the adjacent property owner has given verbal consent, though not yet in writing. The site collects drainage from the city-owned Country Aire Park, including its pool and parking lot, with a total drainage area of 87 acres.

MOTION: A motion was made by Denise Mason, seconded by Donna Wallace
Move to Approve Item 25-599 recommend to City Council to expend funds to construct erosion mitigation downstream of an outlet structure at 215 S Laurel Avenue (Case No. 25-007)

The motion carried by the following vote:

Aye: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

D. 25-600 Consideration, discussion, and possible action to recommend to City Council to expend survey funds to design drainage improvements at 8624 S. Harp Boulevard (Case No. 25-008)

Patrick Wilson, Stormwater Division Manager, presented a drainage mitigation project for Harp Boulevard in Cambridge Estates, a neighborhood originally platted in 1978 in Wagoner County and annexed by Broken Arrow in 1985. The project site, located south of Houston Street and west of Oneta Road, involves a blue line drainage channel receiving runoff from approximately six acres—four of which are road surface. The neighborhood streets are constructed with an inverted crown design, meaning the roads themselves serve as the drainage ditches. Water collects in a low spot referred to as a "drainage flume" and is funneled into a small, inadequately sized yard grate that outlets at the convergence point of the surface flow. During even light rain events, the street becomes fully submerged, with no visible V-channel for drainage, indicating poor conveyance capacity. Photos and videos taken during a minor rainstorm illustrate the extent of the problem and support the need for targeted improvements to manage runoff more effectively.

Mr. Wilson also presented a request for \$12,000 to fund a survey for drainage improvements along Harp Boulevard in Cambridge Estates, a 1978 subdivision annexed by the City of Broken Arrow in 1985. The roads, built with an inverted crown design, act as drainage ditches, channeling stormwater down the street into a small flume and undersized yard inlet. During even light rain events, water accumulates across the whole roadway and flows toward a private residence, where the homeowner currently uses a pump to protect their property. A backyard video confirmed ongoing surface runoff despite minimal rain, with about six acres contributing to the flow, including 20–25 CFS from the road alone. Staff believes in-house engineering can handle the design after surveying, and the eventual construction may involve piping, swales, or a combination, depending on terrain and depth. Though no easement exists now, the affected property appears to reach the creek, making diversion feasible. The proposed improvements would benefit both the homeowner and public infrastructure by reducing flood risk and potential icing hazards in winter.

MOTION: A motion was made by Donna Mason, seconded by David Pickel
Move to Approve Item 25-600 recommend to City Council to expend survey funds to design drainage improvements at 8624 S. Harp Boulevard (Case No. 25-008)

The motion carried by the following vote:

Aye: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

E. 25-601 Consideration, discussion, and possible action to recommend to City Council to expend funds to construct erosion control measures in the Bristol Ponds south detention pond and in the channel between Bristol Ponds and Elm Place (Case No 25-006)

Patrick Wilson, Stormwater Division Manager, presented an update on a drainage mitigation project for the Bristol Ponds area, originally brought forward in October 2024 and approved by the council for design funding. The site, located north of 91st and west of Elm Place near Big Lots and Walmart, includes a city-owned stormwater channel and a privately-owned pond that functions as part of the city's stormwater system. Some required improvements, such as energy dissipators and proper grading, were either never constructed or not built to plan. Water velocity ranges from 8-11 feet per second at Elm to 3.7 feet per second at the pond. Still, as water levels rise, instability increases, leading to significant erosion along the channel and pond banks. Proposed improvements include regrading the city-owned channel, adding riprap for erosion control, and modifying the pond's edge to slow water flow. The plans are progressing, and construction is anticipated to begin in the summer of 2025. Staff recommends approval to ensure proper system function and erosion mitigation.

Patti Pitcock, a Bristol Ponds resident, expressed concern over worsening erosion near the city-owned drainage channel behind Walmart and Big Lots, attributing the problem to inadequate original development and trash accumulation. She noted that algae are monitored monthly, and the situation has deteriorated significantly over the past year, with substantial water velocity washing away stones from the outlet area and threatening nearby properties. A neighbor's fence is now unstable due to soil loss, and two large trees on city property are at risk of falling, potentially causing damage. She praised Patrick Wilson's responsiveness and agreed with the consultant's findings, emphasizing that inadequate development oversight likely contributed to the problem. She urged proactive management in future developments and underscored the urgency of addressing this issue before further damage occurs.

Ms. Pitcock and committee members discussed the Bristol Ponds drainage project further, focusing on funding adequacy, project scope, and the need for a more formal prioritization process. Concerns were raised about tree hazards from erosion near the outlet. Whether those were factored into the current design—Patrick Wilson confirmed they were not but could be addressed using operational funds. The \$230,000 estimate includes a 30% contingency, and the engineer expects to reduce costs in the following design submittal. The current outlet structure, originally intended to include energy dissipators, lacks them, likely due to developer noncompliance in 2005. This omission, along with increasing rainfall intensity, is contributing to recent erosion. There was discussion of potentially modifying the design to include a new concrete outfall structure and whether to involve the HOA in cost-sharing, though no contact has yet been made. While some questioned if this was the best use of remaining Hakey Creek basin bond funds, others noted that the project qualifies and fits within the budget, and leftover funds from other completed projects are being returned to the system. It was agreed that future planning would benefit from a formal project prioritization matrix and continued updates as the 2026 bond vote approaches. The committee expressed support for proceeding with the project while exploring the suggested design updates.

MOTION: A motion was made by Lori Hendricks, seconded by Donna Wiedower
Move to Approve Item 25-601 recommend to City Council to expend funds to construct erosion control measures in the Bristol Ponds south detention pond and in the channel between Bristol Ponds and Elm Place (Case No 25-006)

The motion carried by the following vote:

Aye: 7 - Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

F. 25-607 Consideration, discussion, and possible action to recommend to City Council to expend funds to design drainage improvements in the South Fork Estates subdivision (Case No. 25-010)

Patrick Wilson, Stormwater Division Manager, explained that residents of South Fork Estates raised concerns at the April 15, 2025, City Council meeting about drainage and sediment issues stemming from the neighboring Spring Creek Crossing development. Sediment control is being handled through code enforcement, with the city issuing violation notices and working directly with the developers and engineers. The focus of the current item is on long-standing drainage issues predating Broken Arrow's 1994 stormwater ordinance. Historically, five acres of runoff naturally flowed through what is now South Fork Estates. Still, during its 1992 development, the natural drainage path was filled in, leaving water to sheet flow across private property. Though post-construction runoff from Spring Creek Crossing will be reduced to 15 CFS from the original 25 CFS and the contributing area reduced from five to two acres, slope changes and a lack of ground cover have worsened the runoff's visual impact. The city has met with

affected homeowners and is proposing to install a storm sewer system to capture and redirect this runoff into existing infrastructure, a solution all parties' support. Staff recommends allocating \$25,000 for design work, with the project located within the Broken Arrow Creek basin.

Committee members praised the city for quickly responding to drainage and sediment complaints from South Fork Estates residents regarding the neighboring Spring Creek Crossing development. While Spring Creek Crossing meets current stormwater design criteria and is reducing peak runoff from 25 to 15 CFS, its ongoing construction has increased the speed and visibility of water flow, causing concern among nearby homeowners—especially with the 13-foot elevation difference between their yards and the new development. The city clarified that the original issue stems from a pre-1994 drainage way that was improperly filled in when South Fork was developed.

The proposed solution involves installing an underground storm sewer through a greenbelt behind the affected home to redirect water to an existing inlet, reducing surface flow and mitigating future issues. Both homeowners and the Spring Creek developer have been cooperative, and preliminary design work shows no conflicting utilities in the area. Staff requested \$25,000 for engineering, with construction funding to follow. Though the developer is not legally required to contribute, city staff plan to discuss cost-sharing given their positive cooperation so far. The committee also discussed how Spring Creek's design reflects improved standards and oversight compared to older subdivisions and emphasized continued updates to stormwater policy to prevent similar issues in future developments.

MOTION: A motion was made by Johnnie Parks, seconded by Amber Hamilton
Move to Approve Item 25-607 recommend to City Council to expend funds to design drainage improvements in the South Fork Estates subdivision (Case No. 25-010)

The motion carried by the following vote:

Aye: 7 -
Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

7. Adjournment

The meeting adjourned at 8:04 p.m.

MOTION: A motion was made by Lori Hendricks, seconded by Denise Mason
Move to Adjourn

The motion carried by the following vote:

Aye: 7 -
Amber Hamilton, Donna Wiedower, Donna Wallace, David Pickel, Johnnie Parks, Denise Mason, Lori Hendricks

Mayor

City Clerk