Comprehensive Drainage Master Plan City of Bryant

Phase 1 Report

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Garver Project No.: 20T20090



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1.0 Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- Identify current and future drainage problems;
- Generate proposed solutions to identified problems;
- Develop a Capital Improvement Plan (CIP); and
- Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

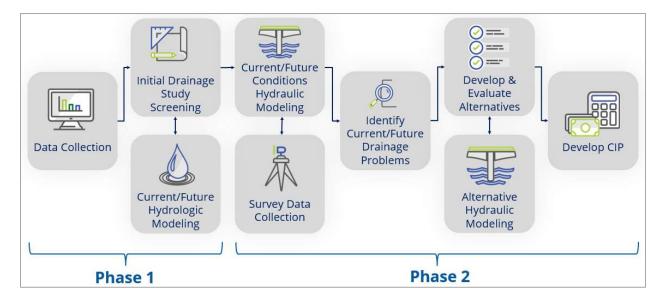


Figure 1. CDMP Project Process

This report discusses the processes and findings of Phase 1.





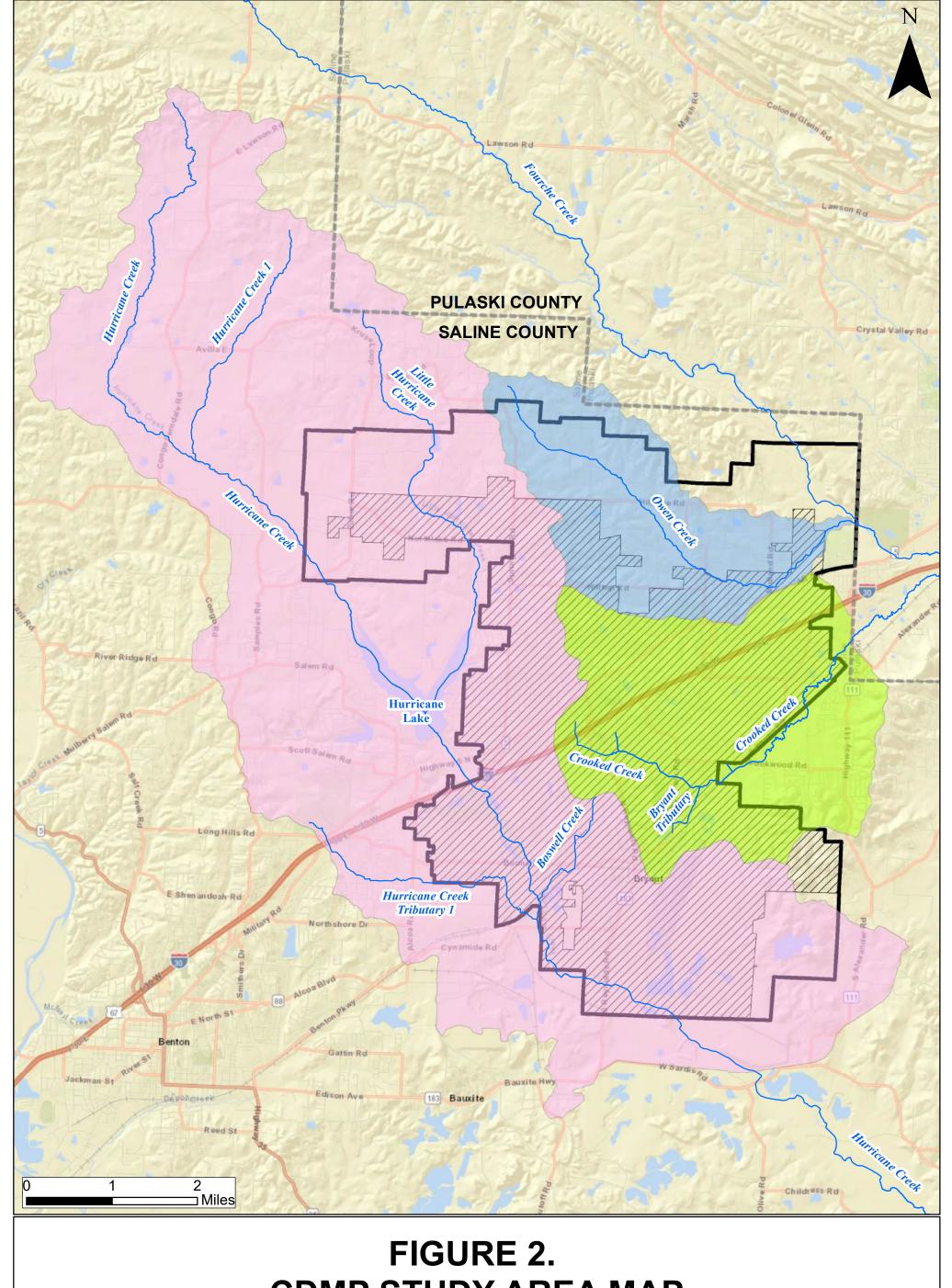
2.0 General Information

According to the project Request for Qualifications (RFQ), the City of Bryant is a homerule city with an incorporated population of 20,231, according to the 2020 census. The City has experienced rapid growth, especially over the past five years, and expects to continue this trajectory of growth in the future. The growth consists of both residential and commercial development, increasing the demand on the existing drainage infrastructure of the City and showing the need for updated and improved infrastructure.

The City of Bryant planning area includes three main drainage basins: Hurricane Creek, Crooked Creek, and Owen Creek. Hurricane Creek is the most western basin, draining approximately 52% of the Bryant planning area. Owen Creek receives approximately 23% of the drainage and is in the northeastern portion of the planning basin. The remaining 25%, located in the southeastern section of the planning area, drains to Crooked Creek. A map of the study area and the three main drainage basins is shown in **Figure 2**.

Since 2008, a number of large flooding events have occurred throughout the City. This recurrence of significant flood issues has led to the need for a comprehensive study and plan for drainage within the City and planning area. This plan, as described in Section 1.0, will provide the City with tools to improve existing drainage conditions and plan for future mitigation. Phase 1 of the CDMP involves Data Collection and an Initial Drainage Study Screening. The results of these tasks will lead to the identification of areas for further study and improvement. Following the completion of Phase 1, a detailed scope of Phase 2 will be developed.





CDMP STUDY AREA MAP









2.1 Drainage Basin Characteristics

The City of Bryant is located along a large drainage divide between two United States Geological Survey (USGS) Hydrologic Unit Code 6 (HUC-6) watersheds, the Lower Ouachita and the Lower Arkansas – Fourche La Fave. The city limits and planning area are divided into three smaller drainage basins: Crooked Creek, Hurricane Creek, and Owen Creek. Hurricane Creek is located along the western portion of the city and contributes to the Lower Ouachita Watershed. The other two basins, Crooked Creek and Owen Creek, are located in the eastern portion of the city and contribute to the Lower Arkansas – Fourche La Fave Watershed. The three drainage basins are described below.

2.1.1 Crooked Creek Basin

The portion of Crooked Creek Basin studied for this CDMP is roughly 9.7 square miles. As mentioned in Section 1.0, Crooked Creek makes up approximately 25% of the planning area. When compared to the current city limits, Crooked Creek Basin accounts for approximately 36% of the area.

The headwaters of Crooked Creek are located within city limits, just west of the intersection of Highway 183 (Reynolds Road) and Highway 5. Runoff flows generally south from this area, draining to a ditch south of W. Commerce Street. This ditch then flows under I-30 and turns generally east-southeast. Crooked Creek Tributary begins just north of I-30 near Main Street and flows south under the interstate until its confluence with Crooked Creek at Dell Drive.

After flowing under Highway 183, Crooked Creek continues east under Mills Park Road. Approximately 1,800 feet downstream of Mills Park Road, Bryant Tributary flows into Crooked Creek. This tributary drains the area northwest of Saline County Airport and the Bloomfield Hills subdivisions. Approximately 1,300 feet downstream of the tributary confluence, Crooked Creek passes under the Union Pacific Railroad. Just upstream of this crossing, the terrain allows for some flow to leave Crooked Creek along the north (upstream) side of the railroad embankment. The ditch in this area is labeled as Trailer Park Ditch, which flows east for approximately 1,100 feet before also passing under the railroad. Trailer Park Ditch flows back into Crooked Creek just west of Linden Drive.

Crooked Creek flows northeast along the south side of the railroad embankment for approximately 8,800 feet before flowing back under the railroad. The portion of Crooked Creek and its drainage basin south of the railroad are outside of Bryant city limits and the planning area.





Crooked Creek reenters the city limits after passing back under the railroad approximately 1,200 feet east of S. Shobe Road. The creek then flows generally east-northeast through undeveloped land until leaving the city limits and planning area approximately 1,450 feet west-southwest of Highway 111 (Alexander Road). Crooked Creek continues flowing generally northeast until it drains into Fourche Creek near Pulaski Technical College in Pulaski County. Fourche Creek flows through the City of Little Rock and eventually drains into the Arkansas River.

2.1.2 Hurricane Creek Basin

Hurricane Creek Basin accounts for approximately 55% of the Bryant city limits and 52% of the planning area. The total study area analyzed for the CDMP, including portions outside the planning area, is approximately 44.9 square miles.

The headwaters of Hurricane Creek begin approximately 4,500 feet northwest of the intersection of W. Lawson Road and Congo Ferndale Road in rural Saline County. It flows generally south-southeast, eventually feeding into the western branch of Hurricane Lake. The lake is reported by the Encyclopedia of Arkansas as a 332-acre manmade lake constructed in 1942. Hurricane Lake is located within the City of Benton near the Bryant city limits. The eastern branch of Hurricane Lake is fed by Little Hurricane Creek. Little Hurricane Creek begins near the Saline County/Pulaski County line just north of Sparks Road. It flows generally south under Northlake Road before entering the lake. The confluence of the two branches of Hurricane Lake occurs approximately 2,100 feet upstream of the Hurricane Lake Dam.

Hurricane Creek continues downstream of the Hurricane Lake Dam outfall, flowing under Highway 5 and I-30. The creek then continues south through The Greens at Hurricane Creek, an 18-hole golf course and apartment community. Several small weirs create ponds in this area. Just south of the golf course, Hurricane Creek flows under Boone Road. Boone Road experiences frequent overtopping in the area of Hurricane Creek. Downstream of Boone Road, Hurricane Creek continues south-southeast under the Union Pacific Railroad and Cynamide Road. It then turns more southeast and flows under Highway 183 (Reynolds Road). The creek then flows out of the city limits and planning area. Hurricane Creek continues flowing south-southeast for over 35 miles before flowing into the Saline River near the Grant County/Dallas County line.

2.1.3 Owen Creek Basin

Owen Creek is the smallest drainage basin within the city limits, accounting for only about 9%. It makes up approximately 23% of the planning area. Overall, the studied drainage basin for Owen Creek is approximately 6 square miles.





The headwaters of Owen Creek begin just outside the planning area near the intersection of Springhill Road and Pamela Way. Owen Creek flows generally southeast through a mostly wooded area. It flows under Hilldale Road twice, entering the city limits at the more downstream crossing of the road. It then flows under Midland Road before turning northeast. Owen Creek flows into Fourche Creek approximately 3,000 feet upstream of the Fourche Creek crossing of Highway 5 (Stagecoach Road). Fourche Creek flows through the City of Little Rock before draining into the Arkansas River.

3.0 Data Collection

In order to complete the CDMP, an array of data was collected. The collected data and information are described in the sections below.

3.1 Historical Records of Drainage, Flooding, and Rainfall

3.1.1 City and Public News Records

The City has documented many past flood events. Historical flood data was compiled from various sources, including City personnel, local news stories, and official social media reports. Major flood events reported since 2008 are listed in **Table 1**. The events listed are based on available information; this is not a comprehensive list of all flood events affecting the City.





Table 1. Major Flood Events within the City of Bryant

| Date | Location of Flood Issue | Flood Type | Stream Affected | Total Event Precipitation (in)* |
|---------------------------|---|-------------------------------|----------------------------|---------------------------------------|
| March 30-April 4, 2008 | Forest Cove/Augusta Cove | Roadway, Yard, Residential | Shoal Creek | 4.20 |
| April 30-May 20, 2011 | Boone Road | Roadway | Hurricane Creek | 6.26 |
| November 20- 22, 2011 | Boone Road | Roadway | Hurricane Creek | 7.02 |
| March 20-23, 2012 | Boone Road | Roadway | Hurricane Creek | 5.53 |
| April 29-30, 2017 | Boone Road | Roadway | Hurricane Creek | 5.14 |
| February 19-24, 2018 | Boone Road | Roadway | Hurricane Creek | 8.44 |
| April 18, 2019 | Hilldale Road/Hilltop Road/Springhill Road/Midland Road | Roadway | Owen Creek | 5.44 |
| May 17-20, 2021 | Oak Glenn Neighborhood | Roadway, Yard, Residential | Owen Creek Tributary | 2.26 |
| March 22, 2022 | Boone Road | Roadway | Hurricane Creek | 3.35 |

^{*}Total event precipitation from NOAA weather station at Adams Field at Little Rock National Airport.

3.1.2 Rainfall Data

3.1.2.1 Historical Rainfall Data

Historical rainfall data was available from the National Weather Service (NWS) for Adams Field at the Little Rock National Airport (LIT), which is located approximately 15 miles to the northeast of Bryant. This is the nearest National Oceanic and Atmospheric Administration (NOAA) weather station to the City of Bryant. **Figure 3** displays the daily total rainfall amounts record at LIT since 2000. This data was collected from the NOAA National Centers for Environmental Information website.





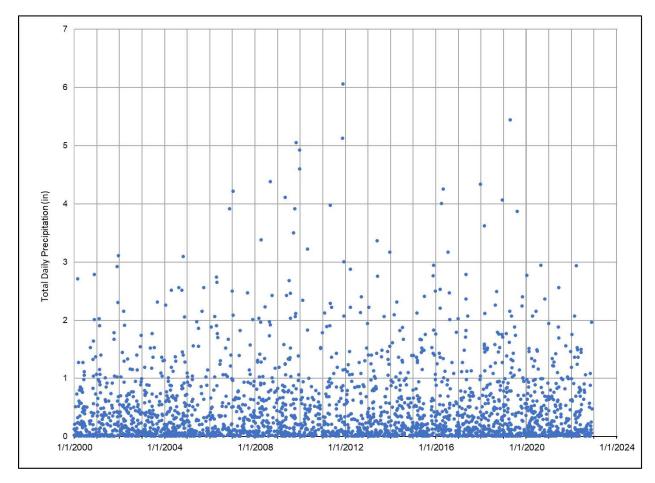


Figure 3. Daily Total Rainfall Data at Little Rock National Airport

Since January 1, 2000, over 2,400 days recorded at least 0.01 inches of rainfall. Of those days, 252 days recorded between 1 and 2 inches, 73 days recorded between 2 and 3 inches, and 27 days recorded greater than 3 inches of rainfall. The maximum recorded daily total rainfall was 6.06 inches, occurring on November 21, 2011.

3.1.2.2 Statistical Rainfall Data

Statistical rainfall data for the City of Bryant was collected from the NOAA Atlas 14 Precipitation Frequency Data Server (Atlas 14) website. Select data is presented in **Table 2**. This precipitation data represents average partial duration time series amounts for specific durations. Select durations and recurrence intervals were chosen based on data that planned for use during the hydrologic task of this project.





Table 2. Select Atlas 14 Precipitation Frequency Data (in inches) for Bryant,
Arkansas

| Duration | Average Recurrence Interval (years) | | | | | | |
|----------|-------------------------------------|------|-------|------|-------|-------|------|
| Duration | 2 | 5 | 10 | 25 | 50 | 100 | 500 |
| 5 min | 0.514 | 0.61 | 0.687 | 0.79 | 0.865 | 0.939 | 1.10 |
| 15 min | 0.919 | 1.09 | 1.23 | 1.41 | 1.55 | 1.68 | 1.97 |
| 1 hr | 1.82 | 2.17 | 2.44 | 2.82 | 3.10 | 3.38 | 4.00 |
| 2 hr | 2.28 | 2.70 | 3.05 | 3.52 | 3.88 | 4.24 | 5.06 |
| 3 hr | 2.56 | 3.04 | 3.44 | 4.00 | 4.43 | 4.87 | 5.91 |
| 6 hr | 3.09 | 3.72 | 4.26 | 5.03 | 5.64 | 6.27 | 7.82 |
| 12 hr | 3.70 | 4.55 | 5.28 | 6.35 | 7.21 | 8.11 | 10.4 |
| 1 day | 4.37 | 5.43 | 6.35 | 7.71 | 8.81 | 9.97 | 12.9 |

3.1.3 Residential Drainage Issue Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received. **Table 3** gives a breakdown of the received comments by issue type.

Table 3. Resident Comments by Type

| Issue Type | Number of Reported Issues |
|---------------------------------------|------------------------------|
| House or Business Flooding | 37 |
| Roadway Flooding | 44 |
| Yard Flooding | 161 |
| Other (includes erosion, storm sewer) | 14 |

According to **Table 3**, over half of the issues reported by residents involved flooding issues in residential or commercial green space (i.e. yards). However, 14% of comments involved flooding that affected a building. Residents that chose the "other" category provided comments involving issues such as stream bank erosion or storm sewer issues.

Table 4 displays the number of comments within each of the three major drainage basins. Crooked Creek Basin reported just over 49% of the comments, and Hurricane Creek Basin reported 45%. Only 6% of the comments were located within the Owen Creek Basin.





Table 4. Resident Comments by Basin

| Drainage Basin | Number of Reported Issues |
|-----------------------|------------------------------|
| Crooked Creek Basin | 128 |
| Hurricane Creek Basin | 119 |
| Owen Creek Basin | 17 |

Table 5 provides the number of comments located within a Flood Emergency Management Association (FEMA) Special Flood Hazard Area (SFHA).

Table 5. Resident Comments by FEMA SFHA

| Special Flood Hazard Area | Number of Reported Issues |
|----------------------------------|------------------------------|
| Floodway | 3 |
| Zone A/AE (non-floodway) | 14 |
| Zone X, 0.2% Annual Chance Event | 2 |
| Zone X, Minimal Flood Hazard | 245 |

The data presented above suggests that most drainage issues within the City occur outside of FEMA-mapped floodplains. All three comments within a mapped floodway occurred along Crooked Creek. The comments regarding issues within Zone A or AE floodplains occurred in all three basins, with the highest concentration of issues occurring along Hurricane Creek near Boone Road and the confluence with Boswell Creek.

Figure 4 shows the resident reported comments within Crooked Creek Basin. **Figure 5** displays the comments within Hurricane Creek Basin, and **Figure 6** shows the comments within Owen Creek Basin. All resident comments are available in Appendix A.

The resident comments were analyzed and later used to compare to hydraulic modeling results for verification of drainage issues. Appendix A includes information regarding the hydraulic modeling results and the identified potential drainage project locations corresponding to the resident comments.



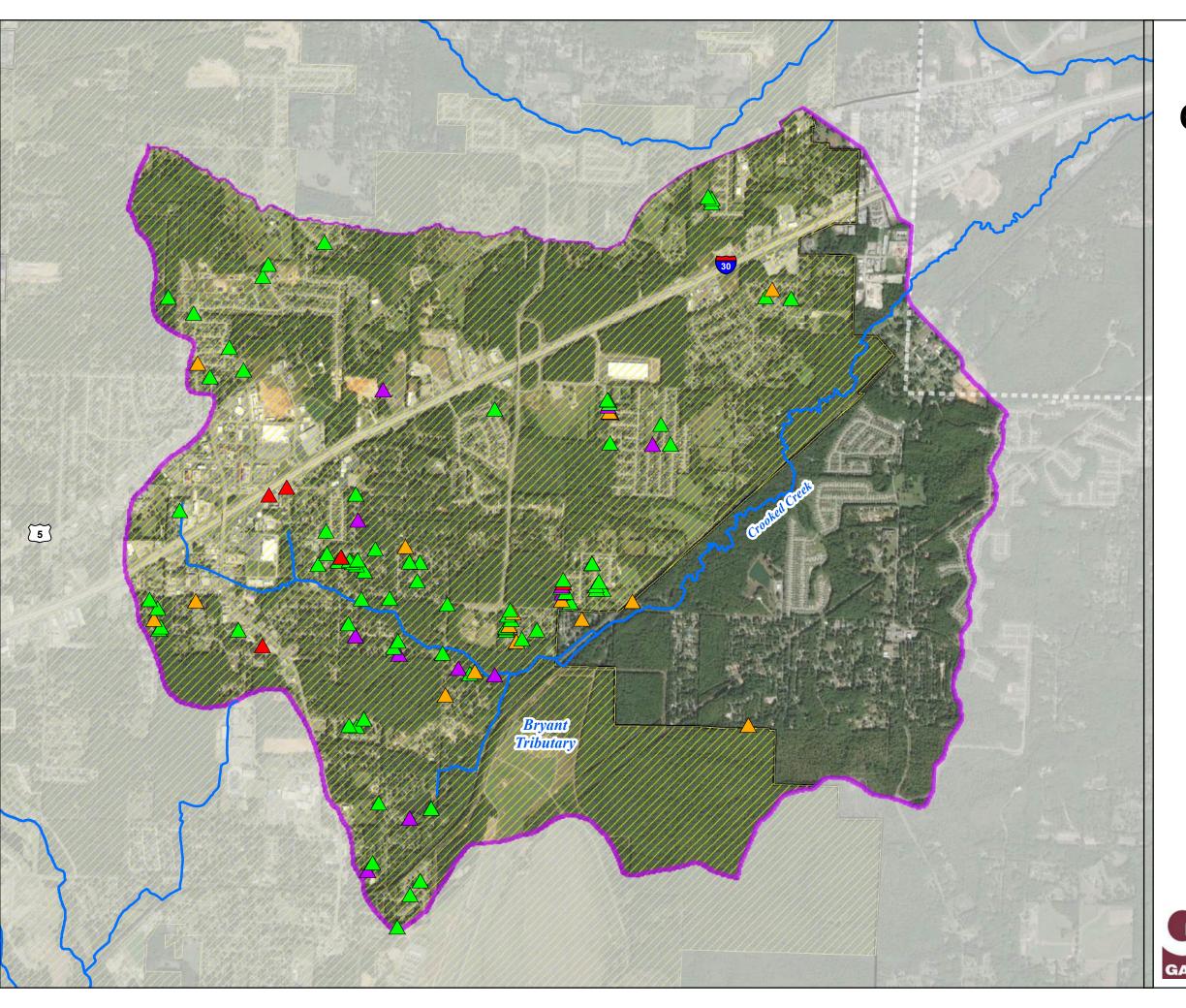


FIGURE 4. CROOKED CREEK BASIN ISSUE MAP

House/Business Issue

Road Issue

Yard Issue

Other Issue

Streams

Bryant City Limits

Bryant Planning Area

0.5 1 Miles





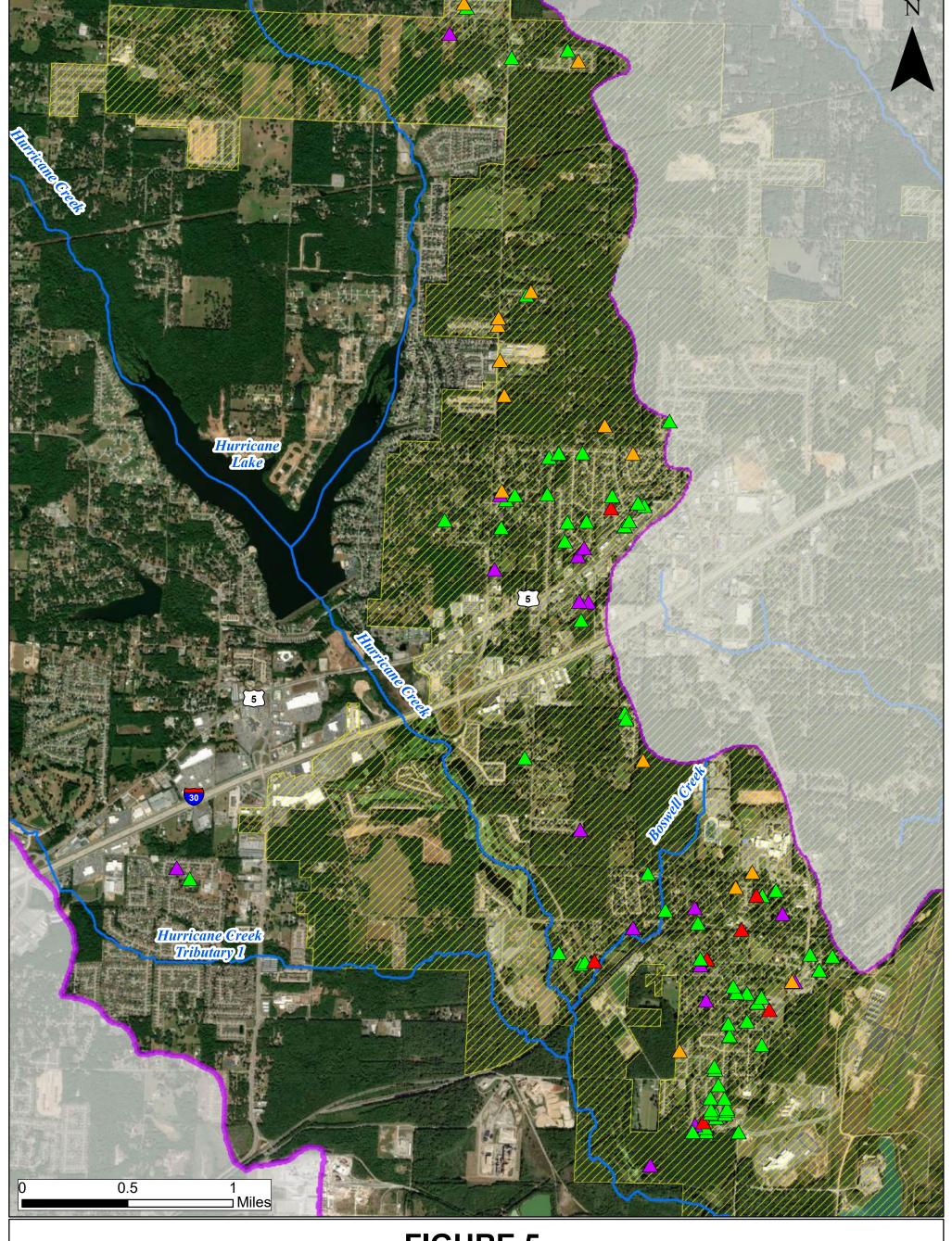


FIGURE 5. **HURRICANE CREEK BASIN ISSUE MAP**



House/Business Issue 🛕 Yard Issue -Road Issue







Bryant City Limits



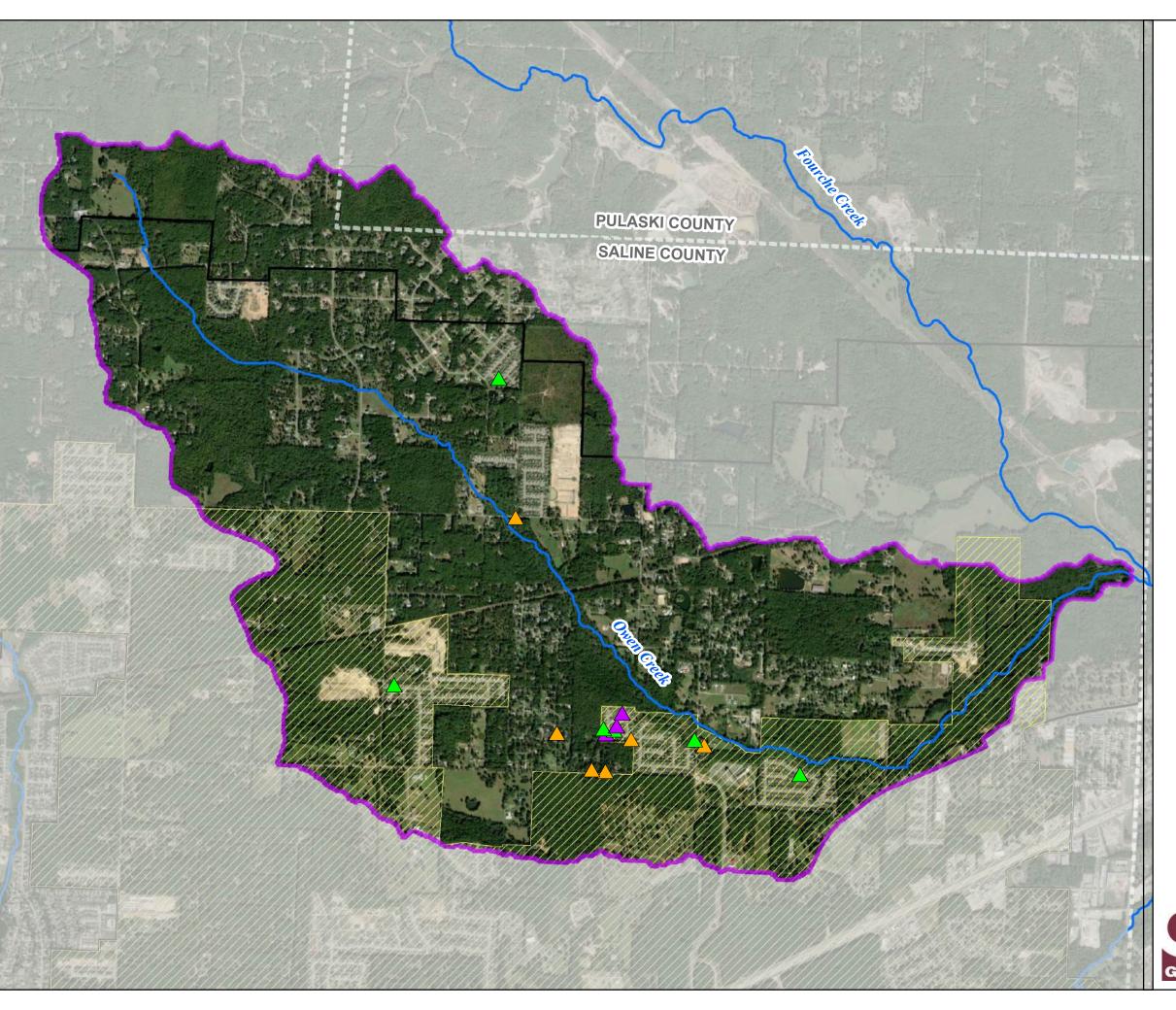


FIGURE 6. OWEN CREEK BASIN ISSUE MAP

House/Business Issue

Road Issue

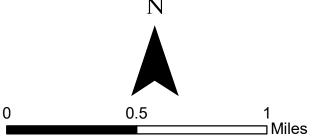
▲ Yard Issue

▲ Other Issue

Streams

Bryant City Limits

Bryant Planning Area









3.2 FEMA NFIP Data

3.2.1 FEMA Mapping and Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0370E, and 0380E. The planning area has multiple streams that are mapped as Zone A or AE, which designates a 1% annual exceedance probability (AEP) (commonly known as 100-year) event boundary.

Zone AE mapping indicates that a detailed hydraulic study has been performed on the mapped stream. Typically, Zone AE mapping includes a regulatory floodway, which represents the encroachment boundary along a stream that would increase the base flood elevations (BFEs) by up to 1 foot. The stream extents mapped as Zone AE with floodway are listed in **Table 6**.

Table 6. Effective Zone AE with Floodway Streams

| Drainage Basin | Stream Name | Zone AE Mapped Stream Extents | |
|------------------------|----------------------------|--|--|
| Hurricane Creek | Hurricane Creek | Approximately 2,400 feet downstream of Zuber Road (near upstream end of Hurricane Lake) to just downstream of Highway 183 | |
| Basin | Little Hurricane Creek | Just downstream of Northlake Road to confluence with Hurricane Creek | |
| | Crooked Creek | Approximately 650 feet upstream of Highway 183 to confluence with Fourche Creek (confluence located in Pulaski County) | |
| Crooked Creek | Crooked Creek Tributary | Just downstream of I-30 to confluence with Crooked Creek | |
| Basin | Bryant Tributary | Just downstream of Arcadia Circle to confluence with Crooked Creek | |
| | Trailer Park Ditch | From flow diversion near Union Pacific Railroad crossing to confluence with Crooked Creek | |
| Owen Creek Basin | Owen Creek | Approximately 1,950 feet upstream of Hilldale Road to confluence with Fourche Creek | |





Zone A mapping indicates an approximated 1% AEP floodplain boundary for a stream for which a detailed study has not been performed. These streams do not have a mapped floodway. The stream extents in the city limits and planning area that are mapped as Zone A are listed in **Table 7**. All Zone A mapped streams are in the Hurricane Creek Basin. Effective FEMA floodplain mapping for Hurricane Creek Basin, Crooked Creek Basin, and Owen Creek Basin is shown in **Figures 7**, **8**, and **9**, respectively.

Table 7. Effective Zone A Streams

| Drainage Basin | Stream Name | Zone A Mapped Stream Extents |
|--------------------|------------------------------|---|
| | Hurricane Creek | Approximately 1,000 feet downstream of W. Lawson Road to approximately 2,400 feet downstream of Zuber Road (beginning of Zone AE mapping) |
| | Hurricane Creek | Just downstream of Highway 183 (end of Zone AE mapping) to confluence with Saline River (in Grant County) |
| | Hurricane Creek 1 | Approximately 6,700 feet upstream of S. Avilla Road to confluence with Hurricane Creek |
| | Hurricane Creek 1.1 | Approximately 2,000 feet upstream of Samples Road to confluence with Hurricane Creek 1 |
| Hurricane Creek | Hurricane Creek 1.2 | Approximately 1,200 feet downstream of Cow Patty Trail to confluence with Hurricane Creek 1 |
| Basin | Little Hurricane Creek | Just downstream of Hester Lake outfall to just downstream of Northlake Road (beginning of Zone AE mapping) |
| | Little Hurricane Creek A | Approximately 740 feet upstream of E. Worth Avenue to confluence with Little Hurricane Creek |
| | Little Hurricane Creek B | Just downstream of Seven Landing Road to confluence with Little Hurricane Creek |
| | Little Hurricane Creek C | Approximately 800 feet upstream of Springhill Road to confluence with Little Hurricane Creek |
| | Little Hurricane Creek C1 | Just upstream of Humes Road to confluence with Little Hurricane Creek C |
| | Little Hurricane Creek D | Approximately 2,150 feet upstream of Springhill Road to confluence with Hurricane Creek C |





| Drainage Basin | Stream Name | Zone A Mapped Stream Extents |
|-------------------|--------------------------------|---|
| | Little Hurricane Creek E | Approximately 420 feet upstream of Northlake Road to confluence with Hurricane Creek |
| | Little Hurricane Creek F | Approximately 2,000 feet upstream of Northlake Road to confluence with Hurricane Creek (at Northlake Road crossing) |
| | Hurricane Creek Tributary 1 | Approximately 970 feet upstream of Heritage Farms Drive to confluence with Hurricane Creek |
| HIITTICANA I TAAK | | Approximately 270 feet upstream of Bay Meadow Drive to confluence with Hurricane Creek Tributary 1 |
| | Boswell Creek | Approximately 2,000 feet upstream of Boswell Road to confluence with Hurricane Creek |



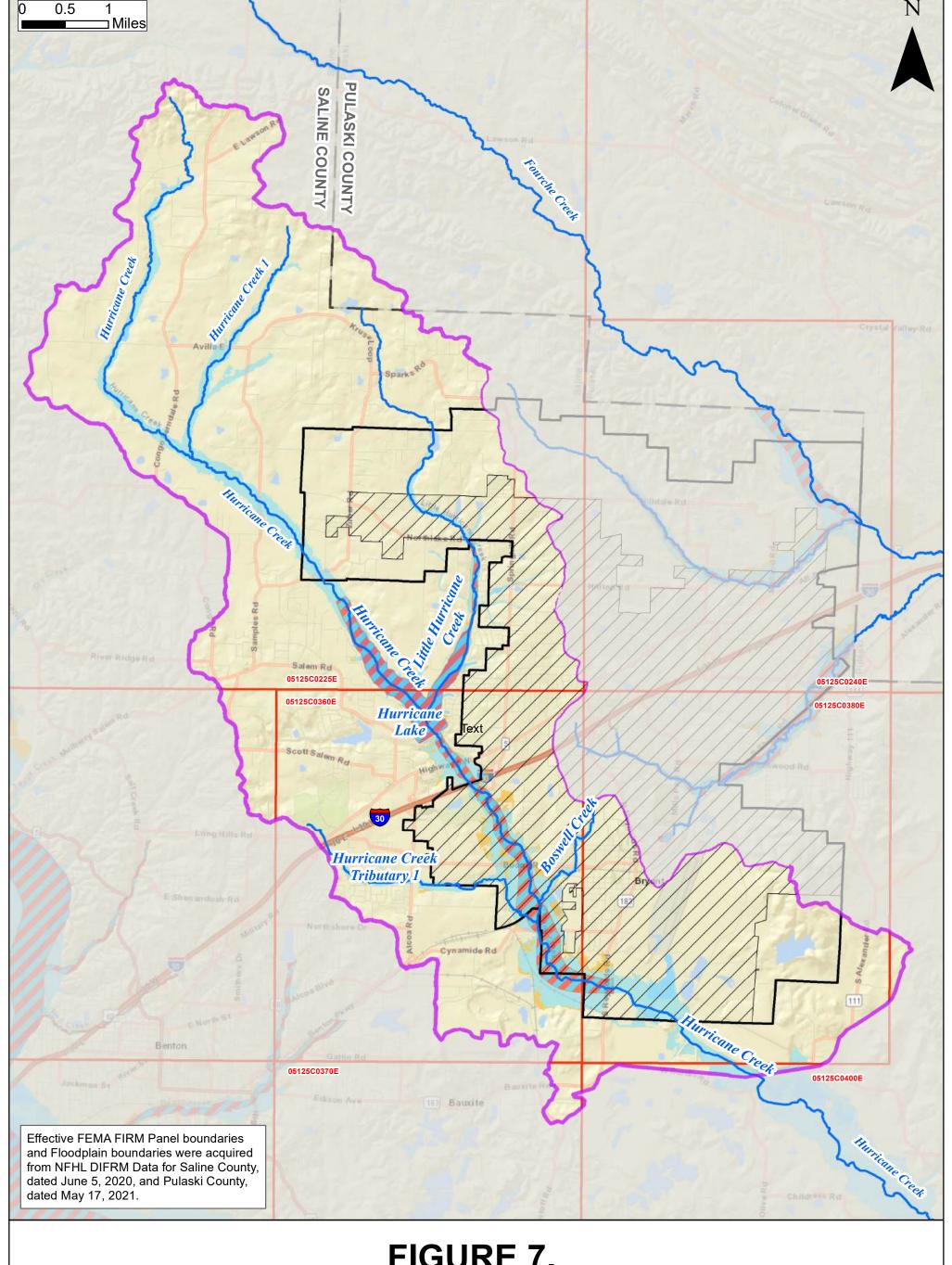
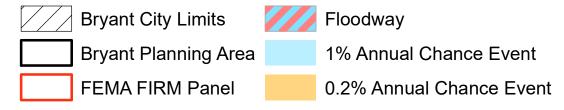
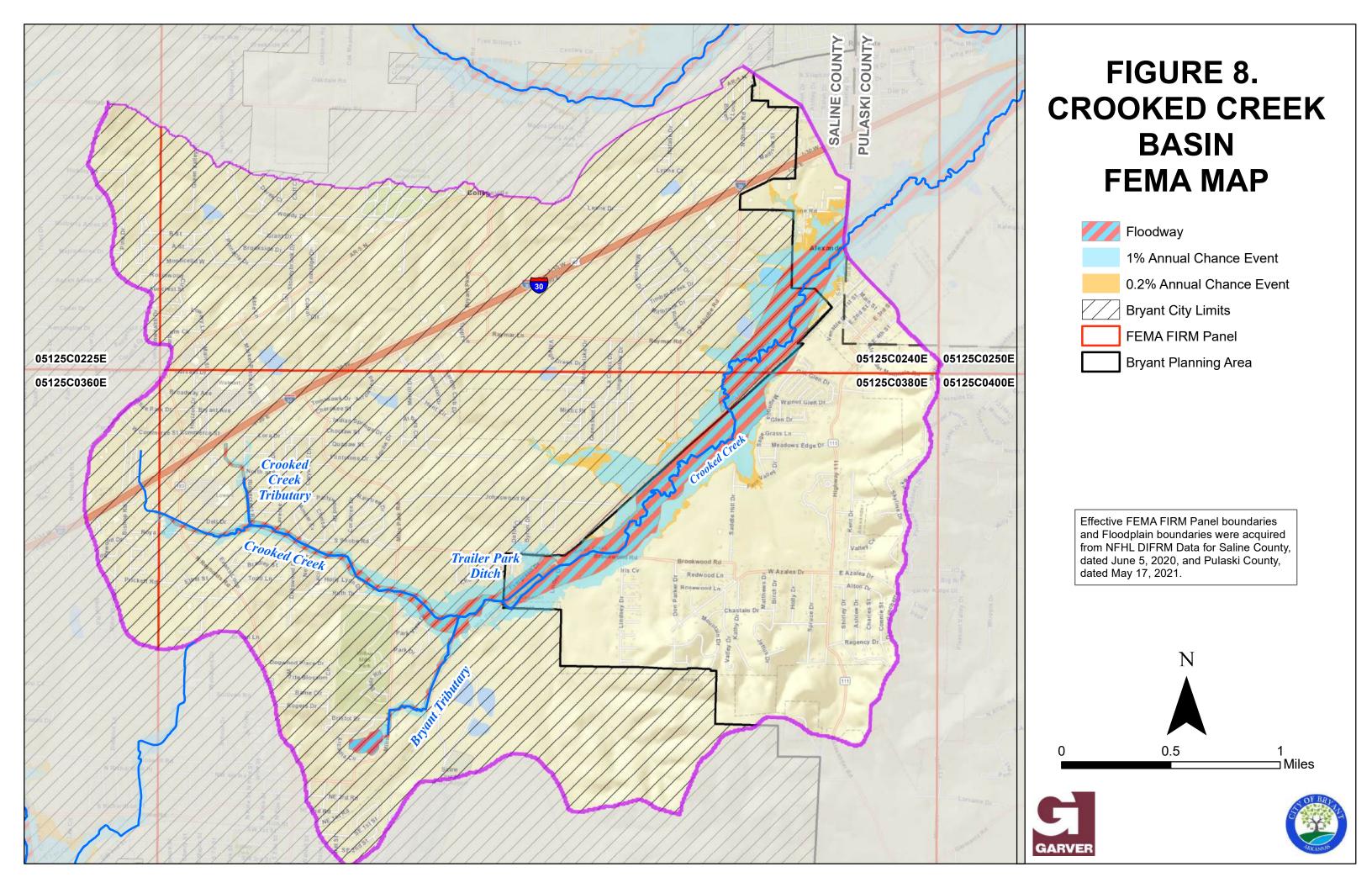


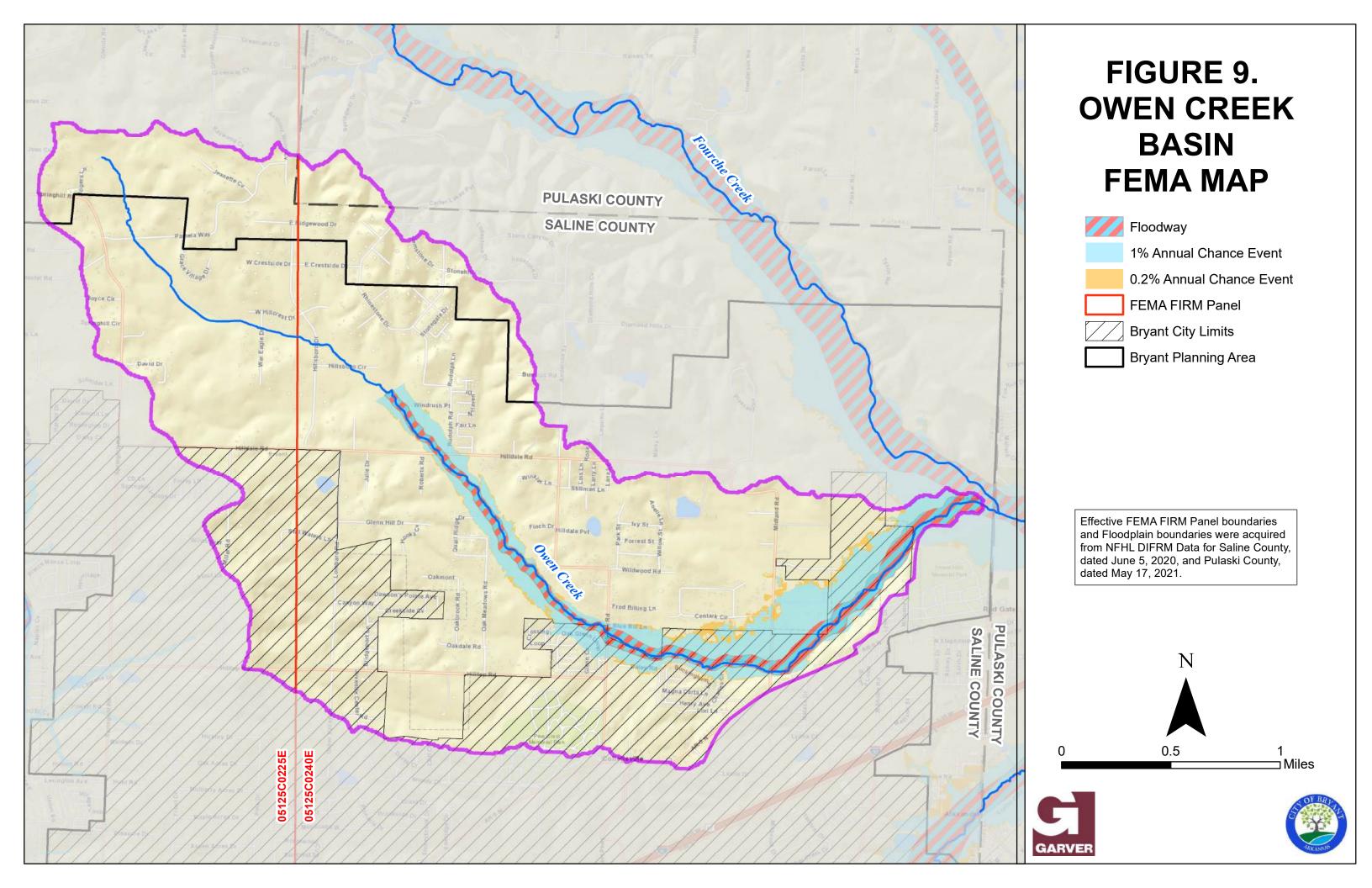
FIGURE 7. HURRICANE CREEK BASIN FEMA MAP













3.2.2 Flood Insurance Policies and Repetitive Loss Data

Flood insurance policy data and repetitive loss information for the City of Bryant was acquired from the State NFIP coordinator at the Arkansas Natural Resources Division (NRD) in June 2022.

A total of 67 flood insurance policies were issued in the City at the time of data collection. Policy data is provided in **Table 8**. Of the 67 policies, 11 covered locations are located within Zone A or AE floodplains. The remainder of the policies were for Zone X locations.

| Parameter | Value |
|---|--------------|
| Policy Count | 67 |
| Premium Total (includes federal policy fee) | \$43,091 |
| Total Building Coverage | \$14,050,700 |
| Total Contents Coverage | \$4,276,000 |
| Average Building Coverage | \$209,712 |
| Average Contents Coverage | \$77,745 |

Table 8. Flood Insurance Policy Data

Repetitive loss data for the City is given in **Table 9**. Of the 14 claims made in the City, 6 of the properties have experienced repetitive losses.

Table 9. Repetitive Loss Data

| Parameter | Value |
|----------------------------------|-----------|
| Number of Property Losses | 14 |
| Repetitive Loss Properties | 6 |
| Total Building Payments | \$240,906 |
| Total Contents Payments | \$66,925 |
| Single Family Property Losses | 6 |
| Other Property Losses | 0 |





Data relating to the insurance policies and repetitive losses in the City of Bryant is given in Appendix B.

3.2.3 Letters of Map Amendments

Though a structure may be located within a SFHA, the elevation of the structure, property, or portion of the property may be above the base flood elevation (BFE). In order to have the property removed and to lower or eliminate the need for its associated floodplain insurance, a Letter of Map Amendment (LOMA) can be applied for. The LOMA application requires that an Elevation Certificate (EC) be completed for the property to show record of its elevation. Currently, the FEMA Map Service Center has 35 LOMA documents on record for properties within the City of Bryant. Specific site information for the LOMAs in the City is given in Appendix C.

3.3 As-built Plans and Data for Existing Infrastructure

3.3.1 Roadway, Bridge, and Development Plans

The City of Bryant has many as-built drawings available for streets, structures, and subdivisions. Due to the volume of information available, as-built drawings will be requested for the CDMP as needed. These drawings will be utilized during the hydraulic modeling process to most appropriately represent the hydraulic system in the modeled areas. In addition, state highway structure drawings will be requested as needed from the Arkansas Department of Transportation (ARDOT).

3.3.2 Traffic Data

Average Daily Traffic (ADT) data is available for federal and state highways and other major roadways in Arkansas through ARDOT. The most current publicly available data is for 2021. **Figure 10** displays the 2021 map published by ARDOT and acquired from the ARDOT Traffic Information Systems website.

3.3.3 Roadway Functional Class

ARDOT provides functional classification for all state highways and interstates as well as some county and city streets. There are 65 roadways within the planning area with an assigned functional class. The classification identifies the type of service that the roadway is intended to provide. The ARDOT Roadway Drainage Manual defines the





design storm events for each type of classification, with design events ranging from 2-year to 50-year depending on the functional class and type of drain.

The roadways within the planning area with an identified functional classification are listed in Appendix D.

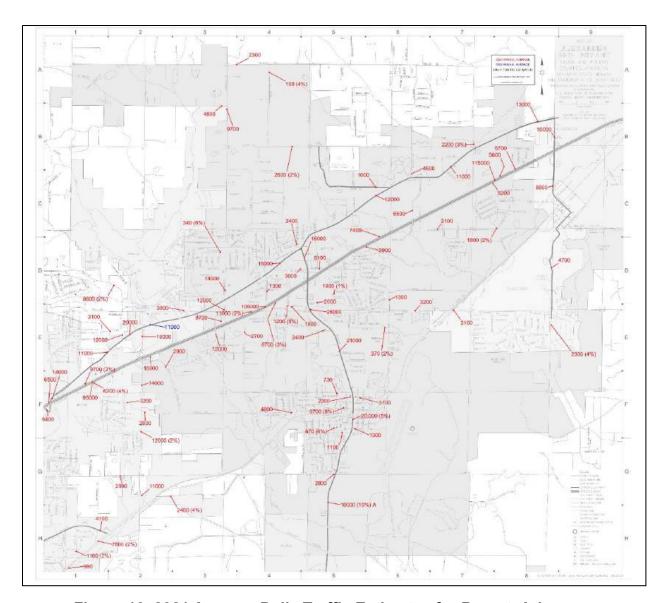


Figure 10. 2021 Average Daily Traffic Estimates for Bryant, Arkansas





3.4 Current Drainage Infrastructure

The City of Bryant has an extensive existing stormwater drainage system. The City provided Garver with a Geographic Information Systems (GIS) database for the stormwater system that included the following shapefiles:

- Stormwater points: inlets, outlets, grates, curb inlets, and other drainage features:
- Stormwater outfalls: points along the city boundary where drainage flows out of the City; and
- Stormwater flowlines: culverts, detention basins, open channels, proposed culverts, unchannelized flow, and streams.

Table 10 lists the types of stormwater points included in the received dataset. The stormwater points are displayed in **Figure 11**.

Number of Stormwater Points Stormwater Point Type Box 1,195 Box (no manhole) 13 **Curb Cut** 235 **Drop Inlet (no manhole)** 6 **End of Pipe** 1,816 Flow Break 760 Grate 258 **Proposed** 1 12 Stormwater Box (no access) **Not Assigned** 58

Table 10. Stormwater Point Data

Table 11 lists the number of stormwater outfalls owned by the City and by ARDOT. The stormwater outfall points are displayed in **Figure 12**.

Table 11. Stormwater Outfall Data

| Outfall Ownership | Number of Outfalls | |
|-------------------|--------------------|--|
| City of Bryant | 199 | |
| ArDOT | 17 | |

Table 12 lists the stormwater flowline types and the number of each type. The stormwater flowlines are also displayed in **Figure 12**.





Table 12. Stormwater Flowline Data

| Stormwater Flowline Type | Number of Flowlines | Length of Flowline Type (ft) |
|--------------------------|---------------------|------------------------------|
| Culvert | 2,337 | 215,727 |
| Detention Basin | 1 | 766 |
| Open Channel | 6,026 | 1,213,335 |
| Proposed Culvert | 1 | 61 |
| Stream | 108 | 53,090 |
| Unchannelized Flow | 75 | 3,825 |

The culvert lines were reviewed by Garver. In addition to the provided shapefiles for existing culverts within the city limits, Garver identified culvert locations throughout the planning area outside of the city limits. This data was utilized during the initial drainage screening model process that will be discussed later in this report.

According to the received data, the City's stormwater system includes approximately 215,727 feet (40.9 miles) of total culvert length. This dataset includes public roadway crossings, private driveway culverts, and longer underground storm sewer pipes. The provided data also shows over 1.2 million feet (approximately 230 miles) of open channels, which includes roadside ditches and other small channels. In addition to this line type, the data includes a separate category for streams, showing over 53,00 feet (10 miles) of streams within city limits.



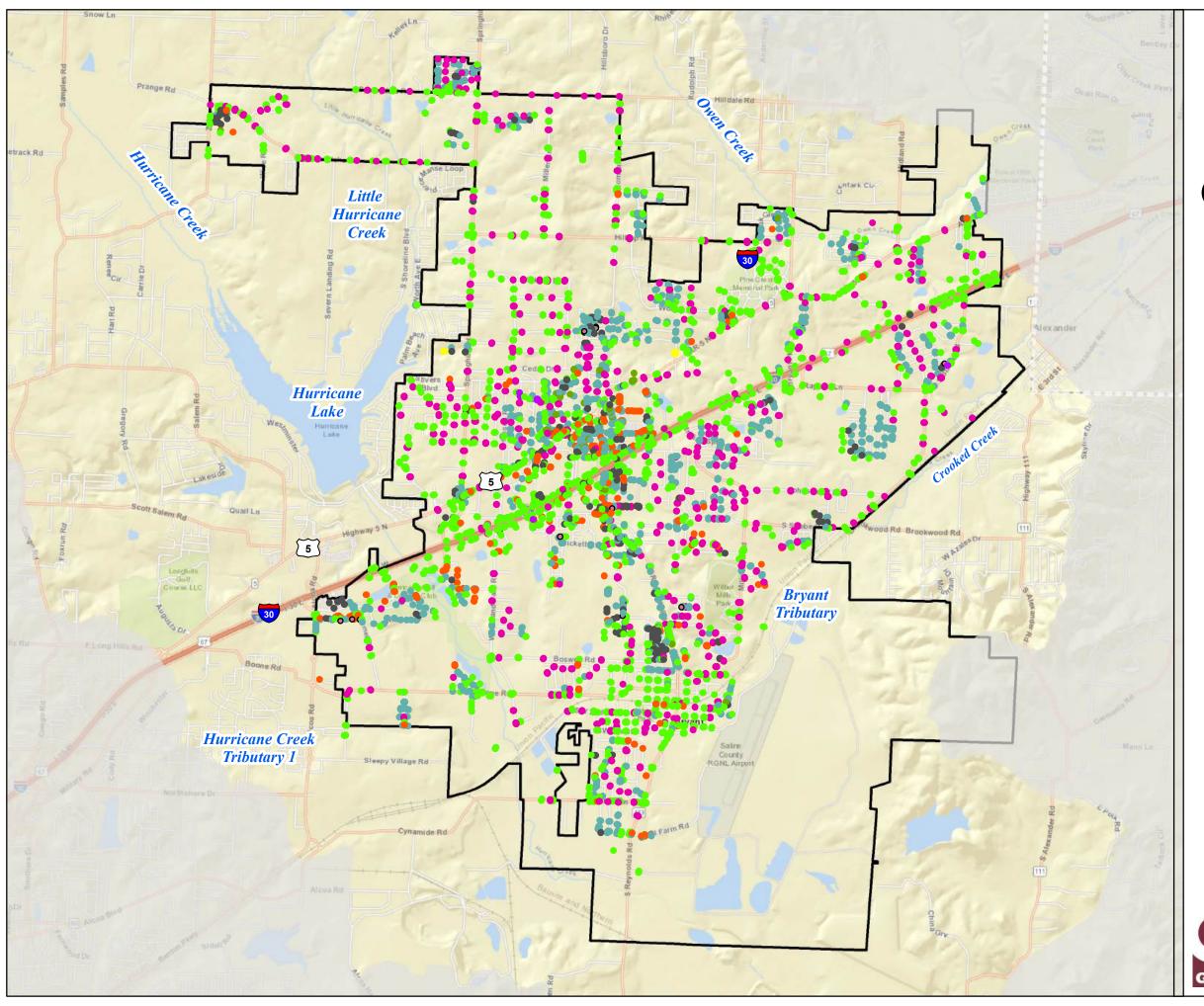
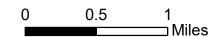


FIGURE 11.

GIS STORMWATER POINT DATA

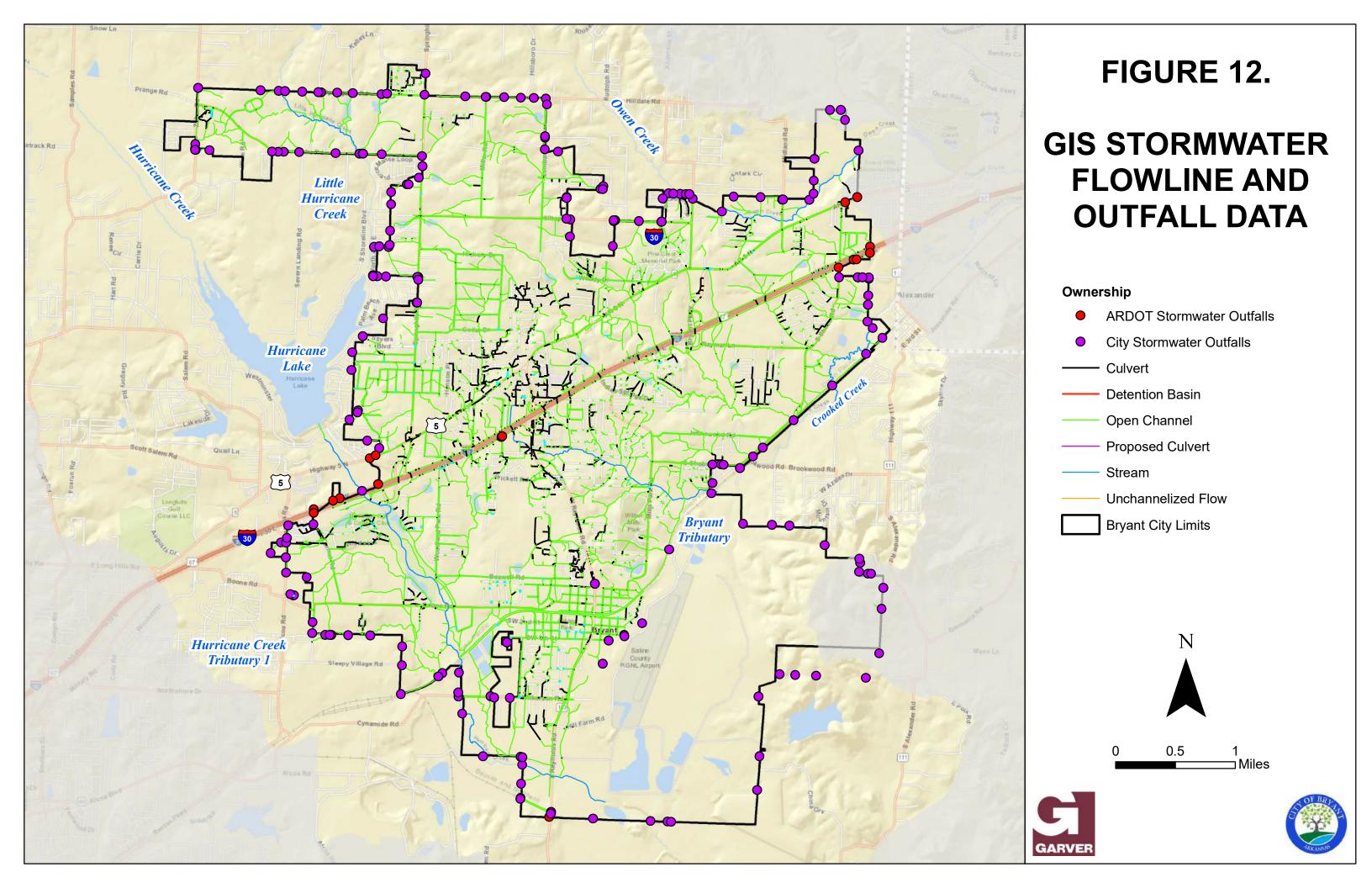
- BOX
- BOX (NO MANHOLE)
- CURB CUT
- DROP INLET (NO MANHOLE)
- END OF PIPE
- FLOW BREAK
- GRATE
- NOT ASSIGNED
- PROPOSED
- SW BOX NO ACCESS
- Bryant City Limits













3.5 GIS Data

The following table, **Table 13**, describes the GIS datasets collected for this CDMP, including those mentioned in previous sections of this report. Data was collected from a variety of sources, including the contracted GIS online platform, EFS GeoTechnologies (EFS) and publicly available websites, including the ESRI ArcGIS online platform.

Table 13. Collected GIS Datasets

| Dataset | Description | Dataset Source |
|------------------------------|---|-------------------------------|
| Bryant City Limits | Current city limit boundary | EFS |
| City Master Street Plan | Roadway lines and names | EFS |
| City Planning Area | Current planning area (ETJ) | EFS |
| City Proposed Zoning | Current proposed zoning map | EFS |
| City Special Zoning | Special zoning types | EFS |
| City Stormwater Outfalls | Drainage outfall locations along city limit boundary | EFS |
| City Stormwater Points | Drainage point locations throughout city limits | EFS |
| City Zoning Districts | | EFS |
| Saline County Parcels | Current parcel information for county | EFS |
| Subdivisions | Subdivision boundaries within city planning area | EFS |
| Average Daily Traffic Counts | Average Daily Traffic (ADT) information for roadways from ARDOT– dataset current through 2019 | Arkansas GIS Office |
| HUC 8 Boundary | Hydrologic Unit Code (HUC) 8 watershed Boundary | USGS |
| Saline County DFIRM Data | Digital Flood Insurance Rate Map (DFIRM) data for Saline County, including floodplain boundaries, BFE lines, water lines, and other FEMA shapefiles | FEMA Map Service Center |
| Pulaski County DFIRM Data | Digital Flood Insurance Rate Map (DFIRM) data for Pulaski County, including floodplain boundaries, BFE lines, water lines, and other FEMA shapefiles | FEMA Map Service Center |





| Dataset | Description | Dataset Source |
|------------------------------------|---|------------------------|
| National Land Cover Data (NLCD) | Land cover dataset from 2019 from Multi- Resolution Land Characteristics Consortium (MRLC) | ESRI |
| Hydrologic Soil Group (HSG) | Hydrologic soil group (HSG) from Soil Survey Geographic Database (SSURGO) | ESRI |
| 1-meter DEM lidar | 1-meter Digital Elevation Model (DEM) lidar topography dataset for project area; data from 2016 USGS Ouachita dataset | Arkansas GIS Office |

3.6 Existing Hydrologic and Hydraulic Models

Hydrologic and hydraulic studies have previously been performed for areas within the City of Bryant and the planning area. Available studies were collected and reviewed.

3.6.1 Hurricane Creek Basin Effective Studies

Since Hurricane Creek is a Zone AE mapped floodplain, Effective hydrologic and hydraulic (H&H) studies were available. A FEMA data request was submitted, and Effective data was received from FEMA on March 23, 2022. In addition to hydrologic and hydraulic models, Technical Support Data Notebooks (TSDN) for the Effective hydrologic and hydraulic studies were received. The hydrology TSDN was dated March 31, 2014, and the hydraulic TSDN was dated November 11, 2014.

The received hydrologic study for the Hurricane Creek Basin was performed in HEC-HMS version 3.5. The model extends from the headwaters of the drainage basin down to Highway 183 (Reynolds Road). The received model will be discussed in further detail in Section 4.1 of this report.

Multiple hydraulic models were received for streams in the Hurricane Creek Basin; received studies were both detailed and limited detail. According to the TSDN, detailed studies utilized survey data for structures, while limited detail studies utilized approximate structure data collected field visits. Additionally, while the 10-, 25-, 50-, 100-, and 500-year flood events were studied for the detailed study streams, only the 100- and 500-year events were studied in the limited detail studies. Detailed models were received for Hurricane Creek and Little Hurricane Creek. Limited detailed studies were received for Hurricane Creek Tributary 1, Hurricane Creek Tributary 1A, and Boswell Creek. All received models were performed in HEC-RAS version 4.1. **Table 14** describes the received models and their extents.





Table 14. Received Effective Hydraulic Models for Hurricane Creek Basin

| Stream Name | Model Extents | Study Type |
|---------------------------------|--|----------------|
| Hurricane Creek | From approximately 2,300 feet downstream of Zuber Road to Highway 183 | Detailed |
| Little Hurricane Creek | From just downstream of Northlake Road to confluence with Hurricane Creek/Lake | Detailed |
| Hurricane Creek Tributary 1 | Approximately 650 feet downstream of Winchester Drive to the confluence with Hurricane Creek | Limited Detail |
| Hurricane Creek Tributary 1A | Approximately 700 feet downstream of Boone Road to confluence with Hurricane Creek Tributary | Limited Detail |
| Boswell Creek | Just downstream of Boswell Road to confluence with Hurricane Creek | Limited Detail |

3.6.2 Crooked Creek Basin Effective Studies

The Effective study for Crooked Creek was first described in the FIS Report for the City of Alexander, published on July 20, 1981. It explains that the Effective flows for Crooked Creek were calculated using NOAA Technical Papers 40 and 49, with the 500-year event extrapolated from the other values calculated.

The hydraulic study for Crooked Creek was performed using HEC-2, a hydraulic software that is now outdated. A FEMA data request was submitted, and data was received on April 22, 2022. The received information for Crooked Creek included scanned PDF documents with model input and output for portions of the creek. The scanned document received for Lettered Sections A and B was dated April 15, 1980. The document received for Lettered Sections C through F was dated May 25, 1993. The document received for the portion of Crooked Creek in Pulaski County was dated March 7, 1986.





In addition to scanned documents, a HEC-2 input file was received for the portion of Crooked Creek from Lettered Section C to F. This input file includes cross section geometry and flow data for the creek in this area. Though HEC-2 is an outdated software, the input file can be read in HEC-RAS for modeling purposes.

In addition to Crooked Creek itself, Crooked Creek Tributary, Bryant Tributary, and Trailer Park Ditch are also mapped as Zone AE, suggesting that detailed studies were performed for these streams as well. The 2020 FIS Report states that all three mapped tributaries to Crooked Creek were studied in 1996 using HEC-1 and HEC-2. No model files were received from FEMA for these three streams. The FIS Report only reports the 100-year flow rates; no other storm events are reported.

3.6.3 Owen Creek Basin Effective Studies

According to the 2020 FIS Report, Owen Creek was studied in April 2000 using HEC-1 to determine flow rates and HEC-RAS version 2.2 to determine floodplain extents and WSELs. A FEMA data request was submitted, and data was received on April 22, 2022. Two HEC-RAS models were received; one model includes a plan for running the 10-, 50-, 100-, and 500-year events, and the other models the floodway. The model geometries are not georeferenced. The FIS Report states that Owen Creek is modeled from approximately 1,000 feet upstream of Hilldale Road to the Pulaski County line.

No hydrologic model or data was received as part of the FEMA data request, but the 2020 FIS Report provides flow rates along Owen Creek.

3.7 City Master Plans and Regulations

The City has numerous master plans, regulations, and ordinances that affect drainage. These are described in the sections below.

3.7.1 Stormwater Management Manual

The City has a published Stormwater Management Manual that was adopted on December 17, 2019. According to the manual, its purpose is to "provide minimum standard for analysis, design, construction, and management of storm drainage facilities and pollution prevention" within the City. The general outline of the manual is as follows:

- Section 100: General Provisions
- Section 200: Drainage Planning and Submittal
- Section 300: Storm Water Management Policy
- Section 400: Storm Water Runoff





- Section 500: Open Channel Flow
- Section 600: Storm Sewer Systems
- Section 700: Street Drainage
- Section 800: Storm Inlets
- Section 900: Culverts and Bridges
- Section 1000: Detention Basins
- Section 1100: Sediment and Erosion Control

3.7.2 Stormwater Management Ordinance No. 2019-32/2020-23

The City of Bryant adopted Stormwater Management Ordinance No. 2019-32 and amended the ordinance as No. 2020-23. This ordinance provides minimum requirements for construction site erosion control and stormwater management for existing and future land development. The main purposes of this ordinance are as follows:

- 1. Protect and preserve waterbodies and their ecosystems from contaminants;
- 2. Ensure that Best Management Practices (BMPs) are used and maintained;
- 3. Mitigate flooding, erosion, and sedimentation;
- 4. Ensure illicit discharge detention and elimination;
- 5. Assure City compliance with state and federal requirements pertaining to the Federal Clean Water Act.

3.7.3 Saline County Hazard Mitigation Plan

The City of Bryant, along with other communities in the county, participated in the development of the Saline County Hazard Mitigation Plan (HMP), approved on September 14, 2017. The plan lists ways in which each community planned to incorporate the HMP into their own plans. It lists Bryant as anticipating the use of the HMP for the following areas related to stormwater and/or drainage: grant application documentation, subdivision management, budget, and building codes.

The plan lists potential mitigation projects for communities within the county. In order for a project to be receive FEMA funding, it must be included in this list. Two projects listed in the HMP that cover the City of Bryant are the following:





- F-26: Conduct drainage improvements at Stillman Loop, Union Pacific Railroad, and Hidden Creek;
- F-27: Conduct drainage projects in areas inside and outside the floodplain that require larger drainage improvements, elevation of roadway, or any other type of flood mitigation project.

F-27 covers any potential flood mitigation project that the City may want to receive FEMA funding for, including BRIC grant funding. The specific locations in F-26 will be investigated during the project identification task of Phase 1 of this CDMP.





4.0 Hydrology

In order to perform hydraulic analyses during Phase 1 and the subsequent Phase 2 of the CDMP, detailed hydrologic analyses were required throughout the city limits and planning area. The hydrologic analyses of each basin are discussed in the following sections.

4.1 Hurricane Creek Basin Hydrology

As was discussed in Section 3.6.1, the FEMA Effective hydrologic study for Hurricane Creek Basin was performed in HEC-HMS version 3.5. The model extends from the headwaters of the drainage basin down to Highway 183 (Reynolds Road).

Since the Effective model was performed in 2014, the model input was reviewed for ensure that it represents current conditions. It was found that the curve number (CN) and other parameters were still representative of the basin. However, the original model utilized TP-40 precipitation data, as the model was developed prior to the release of NOAA Atlas 14 data. Therefore, the model was updated to utilize Atlas 14 precipitation values. It was also run in the most recent version of HEC-HMS, version 4.10. When compared to the Effective FEMA flow rates, the updated flows were within 1.4% on average, with a maximum difference of 5.3%. **Table 15** provides the updated flows for Hurricane Creek Basin.





Table 15. Updated Summary of Discharges for Hurricane Creek Basin

| | | Drainage | Flow Rate (cfs) | | | | | | | | | |
|---------------------|--|-----------------|-----------------|------------|------------|------------|------------|--|--|--|--|--|
| Locatio | on along Stream | area (sq mi) | 10-yr | 25-yr | 50-yr | 100-yr | 500-yr | | | | | |
| | Approximately 2,000 feet downstream of Congo Ferndale Road | 5.69 | 2,021 | 2,612 | 3,055 | 3,510 | 4,606 | | | | | |
| | Immediately downstream of Samples Road | 11.76 | 3,684 | 4,910 | 5,832 | 6,787 | 8,962 | | | | | |
| | Approximately 1,000 feet upstream of Zuber Road | 13.85 | 3,908 | 5,242 | 6,250 | 7,300 | 9,765 | | | | | |
| Hurrican e Creek | Hurricane Creek (Upstream of Hurricane Lake) | 17.73 | 5,152 | 7,013 | 8,519 | 10,17 4 | 14,13 8 | | | | | |
| e Creek | Hurricane Lake Outfall | 24.88 | 8,684 | 11,69 7 | 14,07 6 | 16,59 3 | 22,63 3 | | | | | |
| | Immediately upstream of Interstate 30 | 28.05 | 10,41 0 | 13,96 7 | 16,68 1 | 19,49 4 | 26,55 0 | | | | | |
| | Immediately upstream of Boone Road | 30.88 | 10,56 7 | 13,99 5 | 16,77 3 | 19,76 2 | 27,05 1 | | | | | |
| | Immediately upstream of Cynamide Road | 34.55 | 10,92 6 | 14,72 4 | 17,68 7 | 20,81 | 28,51 1 | | | | | |
| | Immediately upstream of State Highway 183 | 36.83 | 10,82 7 | 14,82 5 | 17,95 1 | 21,25 6 | 29,35 3 | | | | | |
| Little Hurrican | Just downstream of Northlake Road | 4.11 | 2,673 | 3,431 | 3,981 | 4,534 | 5,798 | | | | | |
| e Creek | Just upstream of Hurricane Lake | 6.59 | 3,778 | 4,937 | 5,775 | 6,654 | 8,669 | | | | | |





4.2 Crooked Creek Basin Hydrology

As described in Section 3.6.2, the Effective flows for Crooked Creek were calculated using NOAA Technical Papers 40 and 49, with the 500-year event extrapolated. However, Garver was contracted to perform an updated hydrologic analysis for the Bryant Parkway project. Garver developed an HEC-HMS model for Crooked Creek from the headwaters to the western Union Pacific Railroad crossing near Trailer Park Ditch. For the CDMP, this model was utilized and extended to the Effective FEMA extents at the Pulaski County line.

Table 16 provides the updated flows for Crooked Creek Basin. Flows determined in the updated Garver model were compared to Effective flows used in the Effective hydraulic model, which included only the 1% AEP event. By comparison, most locations were within 2% of the flow in the Effective model. However, two locations, near the Union Pacific Railroad (west crossing) and Linden Drive, were 10.8% and 17.3% different. The differences in these locations are likely due to the split flow between Crooked Creek and Trailer Park Ditch. Garver conducted a 2-dimensional (2D) hydraulic model of basin that provides a more representative flow distribution in this area. The 2D model will be discussed later in this report.





Table 16. Updated Summary of Discharges for Crooked Creek Basin

| Stream | Location along | Drainage | Flow Rate (cfs) | | | | | | | | | | |
|-------------------------------|--|-----------------|-----------------|-------|-------|--------|--------|--|--|--|--|--|--|
| Name | Stream | Area (sq mi) | 10-yr | 25-yr | 50-yr | 100-yr | 500-yr | | | | | | |
| | ~1,200 feet downstream of Reynolds Road (Hwy 183) | 0.49 | 842 | 1,007 | 1,132 | 1,252 | 1,519 | | | | | | |
| | ~630 feet upstream of Mill Park Road | 1.40 | 2,221 | 2,687 | 3,025 | 3,363 | 4,151 | | | | | | |
| Crooked Creek | At Union Pacific Railroad - West Crossing | 2.38 | 2,834 | 3,548 | 4,073 | 4,598 | 5,846 | | | | | | |
| | At Linden Drive | 3.30 | 3,494 | 4,469 | 5,191 | 5,923 | 7,628 | | | | | | |
| | At Brookwood Road | 3.49 | 3,614 | 4,640 | 5,403 | 6,173 | 7,963 | | | | | | |
| | At Union Pacific Railroad - East Crossing | 7.79 | 5,718 | 7,427 | 8,791 | 10,211 | 13,586 | | | | | | |
| | At Alexander Road (Hwy 111) | 9.71 | 6,165 | 8,072 | 9,613 | 11,240 | 15,070 | | | | | | |
| | At Highway 5 | 0.65 | 848 | 1,034 | 1,172 | 1,309 | 1,610 | | | | | | |
| Unnamed | ~2,100 feet downstream of I-30 | 1.45 | 1,885 | 2,285 | 2,579 | 2,870 | 3,561 | | | | | | |
| Tributary 2 | Tributary at confluence with Crooked Creek (near Shobe Road) | 2.68 | 2,461 | 3,023 | 3,442 | 3,898 | 4,976 | | | | | | |
| Crooked Creek Tributary | Tributary at confluence with Crooked Creek (at Dell Drive) | 0.28 | 618 | 736 | 825 | 910 | 1,096 | | | | | | |
| Bryant Tributary | Tributary at confluence with Crooked Creek | 0.64 | 780 | 993 | 1,156 | 1,309 | 1,659 | | | | | | |
| Trailer Park Ditch | Ditch at confluence with Crooked Creek (at Union Pacific Railroad) | 0.21 | 270 | 351 | 414 | 477 | 617 | | | | | | |





4.3 Owen Creek Basin Hydrology

According to Section 3.6.3, the Effective model for Owen Creek was developed in HEC-1. A model was not received as part of the FEMA data request. A new HEC-HMS was developed for the CDMP. **Table 17** provides the updated flows for Owen Creek.

Table 17. Updated Summary of Discharges for Owen Creek Basin

| l costion clong | Drainage | Flow Rate (cfs) | | | | | | | | | | | | |
|---|-----------------|-----------------|-----------|-----------|-----------|-------|------------|--------|--|--|--|--|--|--|
| Location along Stream | Area (sq mi) | 2-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100- yr | 500-yr | | | | | | |
| Just downstream of Hillsboro Road | 1.45 | 841 | 1,17 0 | 1,45 4 | 1,84 6 | 2,147 | 2,450 | 3,127 | | | | | | |
| At Hilldale Road (E-W)/ Midland Road | 2.46 | 1,07 5 | 1,50 8 | 1,90 9 | 2,49 1 | 2,956 | 3,424 | 4,480 | | | | | | |
| Just upstream of Owen Creek Tributary | 3.12 | 1,118 | 1,60 0 | 2,02 | 2,64 0 | 3,131 | 3,666 | 4,894 | | | | | | |
| Just downstream of Owen Creek Tributary | 4.37 | 1,81 7 | 2,56 3 | 3,20 7 | 4,16 2 | 4,887 | 5,627 | 7,375 | | | | | | |
| At Hilldale Road (N-S) | 4.54 | 1,86 4 | 2,61 5 | 3,26 3 | 4,22 3 | 4,954 | 5,732 | 7,512 | | | | | | |
| At Midland Road | 5.26 | 2,16 2 | 2,94 8 | 3,55 2 | 4,45 1 | 5,174 | 5,924 | 7,872 | | | | | | |
| Near confluence with Fourche Creek | 5.93 | 2,10 3 | 2,90 7 | 3,58 1 | 4,50 9 | 5,257 | 6,078 | 8,095 | | | | | | |

Flows calculated in the HEC-HMS model were compared to those published in the Effective FIS Report for Owen Creek. Published flows for the 1% AEP were on average about 22% greater than Effective flows. All published flows were less than those calculated in the HEC-HMS model. Differences in calculated and published values are most likely due to a combination of reasons, including significant development in the drainage basin since the original calculations were performed and changes in calculation methodologies between HEC-1 and HEC-HMS.





5.0 Initial Drainage Study Screening

An initial drainage study screening was performed for the City and planning area. This was done by developing a simplified 2D hydraulic model of each subbasin. The purpose of these models was to understand the overall flow patterns of each basin, develop flood mapping for multiple storm events for the entire City, and quantify flood risk by developing a flood severity index. The results of the severity index were then combined with results from the resident drainage issue database to identify locations for further study in Phase 2 of the CDMP.

The initial screening models were developed for each major basin, with one model for each of the following basins:

- Little Hurricane Creek
- Hurricane Creek
- Crooked Creek
- Owen Creek

The modeling methods and assumptions are described in the following section.

5.1 Methodology

The initial screening models were developed using a 2D hydraulic modeling software generated in U.S. Army Corps of Engineers' (USACE) HEC-RAS software version 6.2. As the developed models are intended to understand overall drainage patterns and identify potential problem locations, the model geometries were simplified to meet this purpose. Therefore, the developed screening models utilize lidar topography to represent all hydraulic structures, and culverts and bridges were not explicitly modeled. This approach is common for watershed-based modeling; more detailed modeling will be conducted in Phase 2 for design purposes.

5.1.1 2D Mesh Development

The 2D mesh for each model was structured so that the elements are larger outside of the floodplain and in higher elevations, which are less likely to be inundated during the model simulations. The element density is generally the greatest at bridge openings, roadway embankments, and major streams. A finer mesh (more nodes and elements) will lead to longer model runtimes (the time it takes to process results). The mesh for each model was developed to produce acceptable results but minimize excessive runtimes. The mesh contains cells with a minimum cell size of 15 feet and a maximum cell size of 60 feet.





The main channels were represented with rectangular adaptive mesh elements that are generally elongated in the direction of flow along the channels. Likewise, roadway embankments are generally represented by quadrilateral elements. The remainder of the mesh is composed of hexagonal non-adaptive elements. Breaklines were drawn along the thalweg of smaller channels to ensure that the channels were represented in the mesh. Breaklines were also used to define significant changes in topography and to adjust the mesh density where appropriate.

5.1.2 Surface Terrain Data

The terrain data for the 2D model was built from 2016 USGS Ouachita dataset 1-meter Digital Elevation Model (DEM) lidar topography. This elevation data is publicly available through the Arkansas GIS Office. Because the models were built for screening uses and not design, detailed crossing structure data was not used. Instead, the terrain was modified to include channels through the roadway with the same structure width observed in aerial imagery. This allows flow to pass while still showing the ponding effects at crossings.

5.1.3 Curve Numbers

Since the model uses rain-on-mesh methodology, infiltration needed to be represented. The SCS Curve Number Method was utilized as the infiltration method. Curve numbers (CN) were determined using aerial imagery, USGS hydrologic soil groups, and the 2019 National Land Cover Database (NLCD), available from USGS. This dataset was checked against the most current aerial imagery and updated as needed to reflect any newly developed areas. A 10-foot resolution CN raster was used as an input for the model.

5.1.4 Manning's Roughness Coefficients

The roughness coefficients for the project domain were set using a Manning's n gridded dataset. The land use types and corresponding Manning's n roughness coefficients are listed in **Table 18**. The Manning's n values used for the non-channel areas were derived from the HEC-RAS Users' Manual as well as the modeler's previous experience with rain-on-mesh 2D models.





Table 18. Screening Model Land Use Types and Roughness Coefficients

| Land Use Type | Manning's <i>n</i> Value |
|---------------------------------|-----------------------------|
| Channel | 0.05 |
| Developed, Low Intensity | 0.0678 |
| Emergent Herbaceous Wetlands | 0.1825 |
| Developed, High Intensity | 0.0404 |
| Cultivated Crops | 0.037 |
| Developed, Medium Intensity | 0.0678 |
| Developed, Open Space | 0.0404 |
| Deciduous Forest | 0.36 |
| Evergreen Forest | 0.32 |
| Mixed Forest | 0.4 |
| Herbaceous | 0.368 |
| Hay-Pasture | 0.325 |
| Shrub-Scrub | 0.4 |
| Woody Wetlands | 0.086 |
| Barren Land | 0.0113 |

5.1.5 Boundary Conditions

The 5-, 10-, 50-, and 100-year storms were analyzed in unsteady flow conditions with rain-on-mesh precipitation. A 1-minute interval precipitation hyetograph for each storm event was generated in HEC-HMS using NOAA Atlas 14 data. The Atlas 14 rainfall values utilized for the City were discussed in Section 3.1.2.2, with values in **Table 2**. The downstream boundary conditions for each model were set to normal water surface elevation (WSEL) with a downstream energy-grade slope that was estimated from lidar data in the downstream channel bottom slope.

5.1.6 Model Controls

Each model was set to run for three days to allow the hydrographs to peak and reach their descending limb. The time step was controlled by courant condition. Arbitrary start dates and times were selected. Diffusion Wave was used for the governing 2D hydraulic equations.





5.2 Initial Screening Model Results

The results of the 2D models were reviewed to determine the existing flow patterns throughout the City. To identify existing drainage deficiencies, a flood severity index was developed based on the 2D model results. Flood depth and velocity were used to determine flood severity levels.

The hydraulic parameters were calculated in the HEC-RAS sub-program RASMapper and categorized using the flood severity index described in **Table 19** and **Figure 13**.

Table 19. Flood Severity Index Classes

| Class | Description | Depth <i>y</i> (ft) | Velocity <i>v</i> (ft/s) |
|-------|--|------------------------|-----------------------------|
| FS0 | Minimal severity | < 0.5 | - |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |





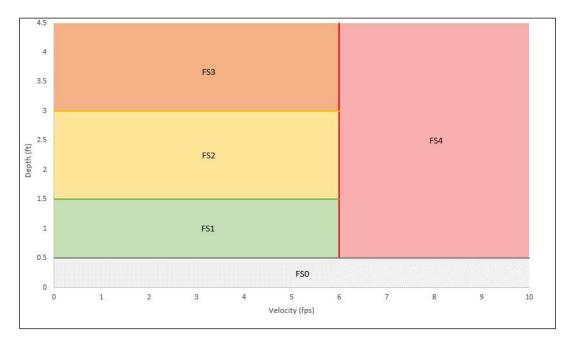
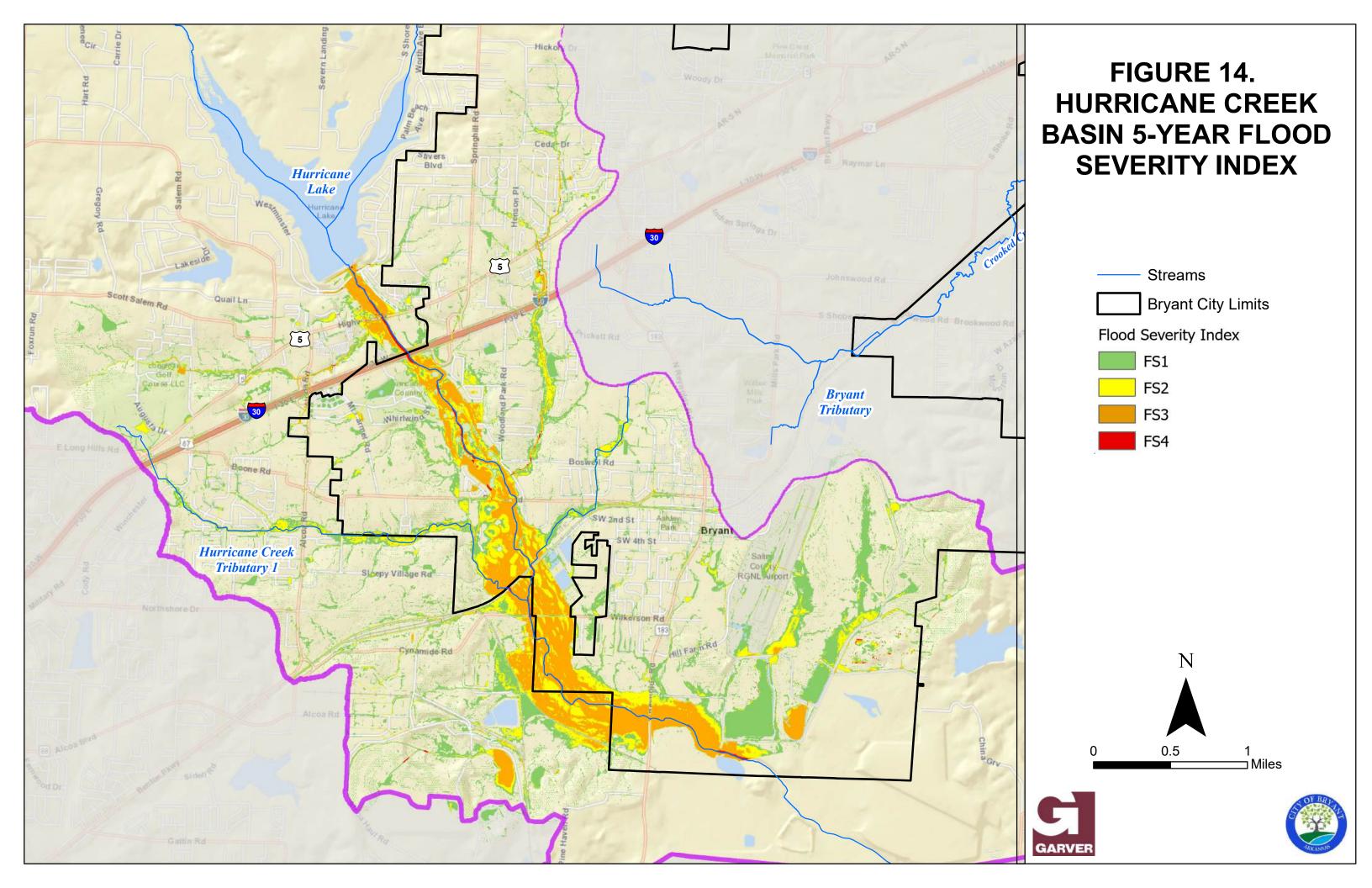
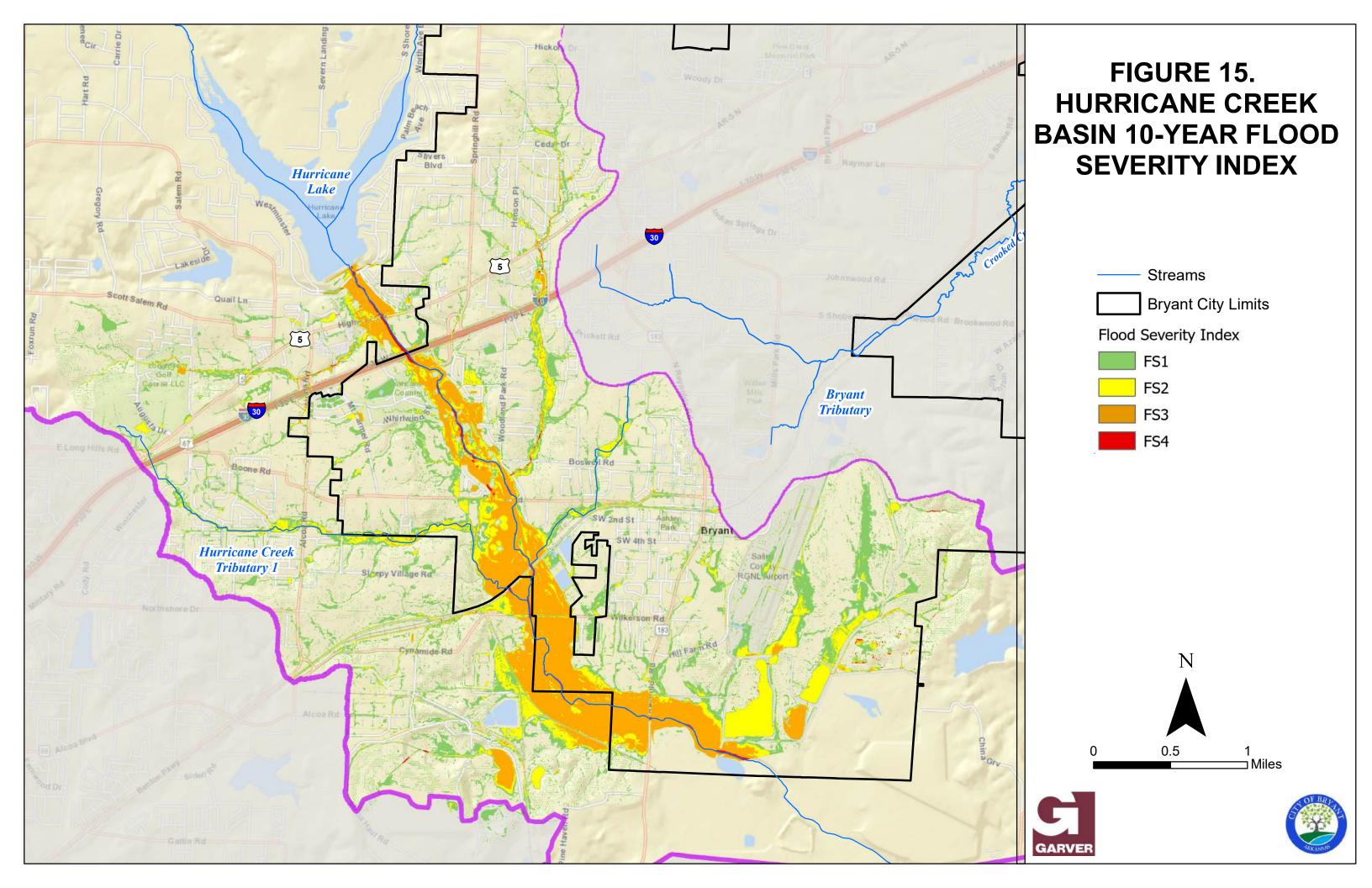


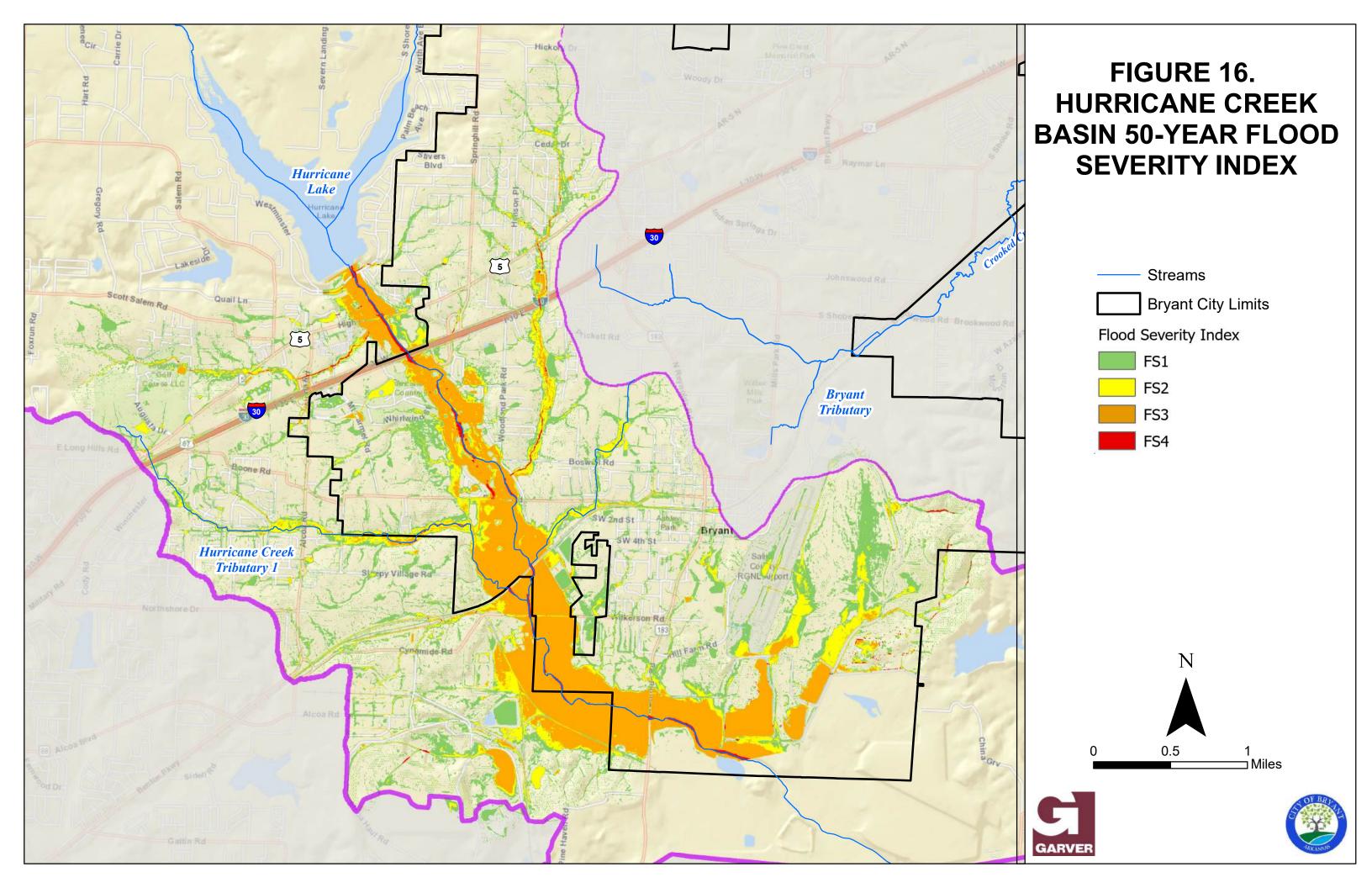
Figure 13. Flood Severity Index Graph

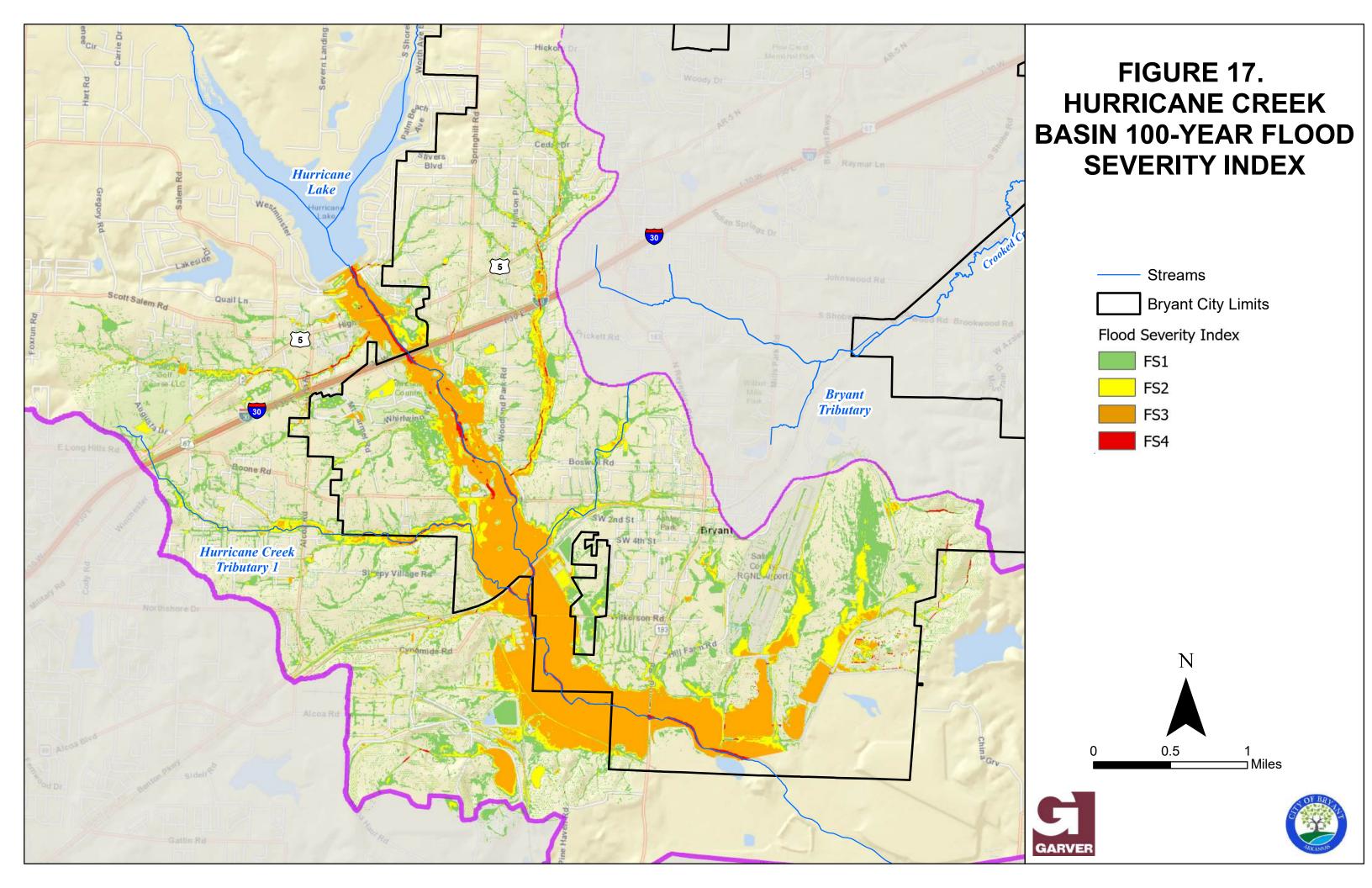
The flood severity for each basin was plotted for the 5-, 10-, 50-, and 100-year events. This allowed for severity to be plotted for more frequent events as well as the less frequent, larger storm events. The flood severity for the four analyzed events in the lower Hurricane Creek Basin are mapped in **Figure 14** through **Figure 17**. Because of the selected modeling boundary, Little Hurricane Creek Basin was modeled separately. The four analyst events for Little Hurricane Creek Basin are mapped in **Figure 18** through **Figure 21**. Crooked Creek Basin is mapped in **Figure 22** through **Figure 25**, and Owen Creek Basin in **Figure 26** through **Figure 29**.











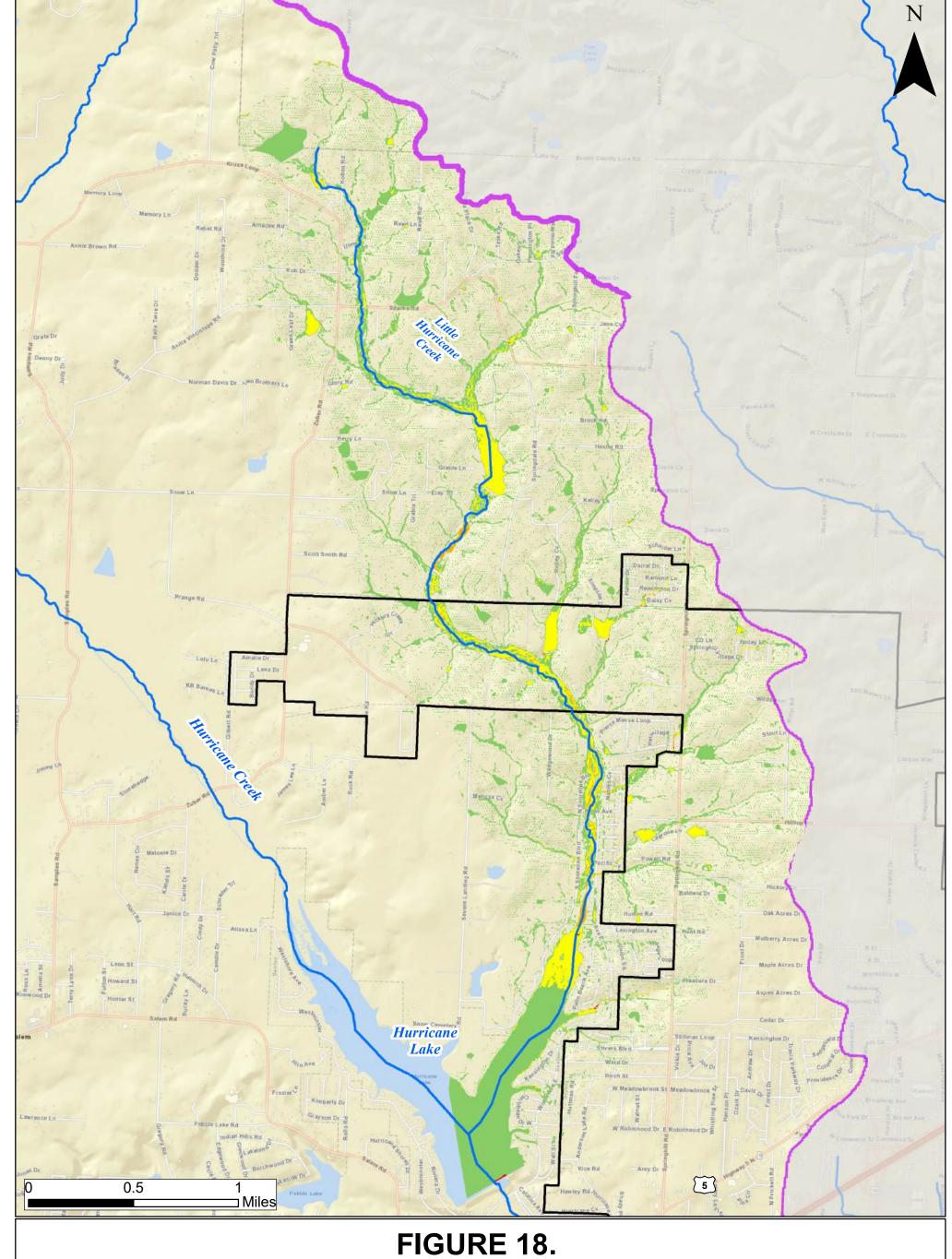
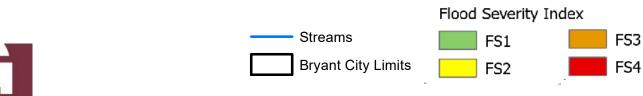


FIGURE 18. LITTLE HURRICANE CREEK BASIN 5-YEAR FLOOD SEVERITY INDEX







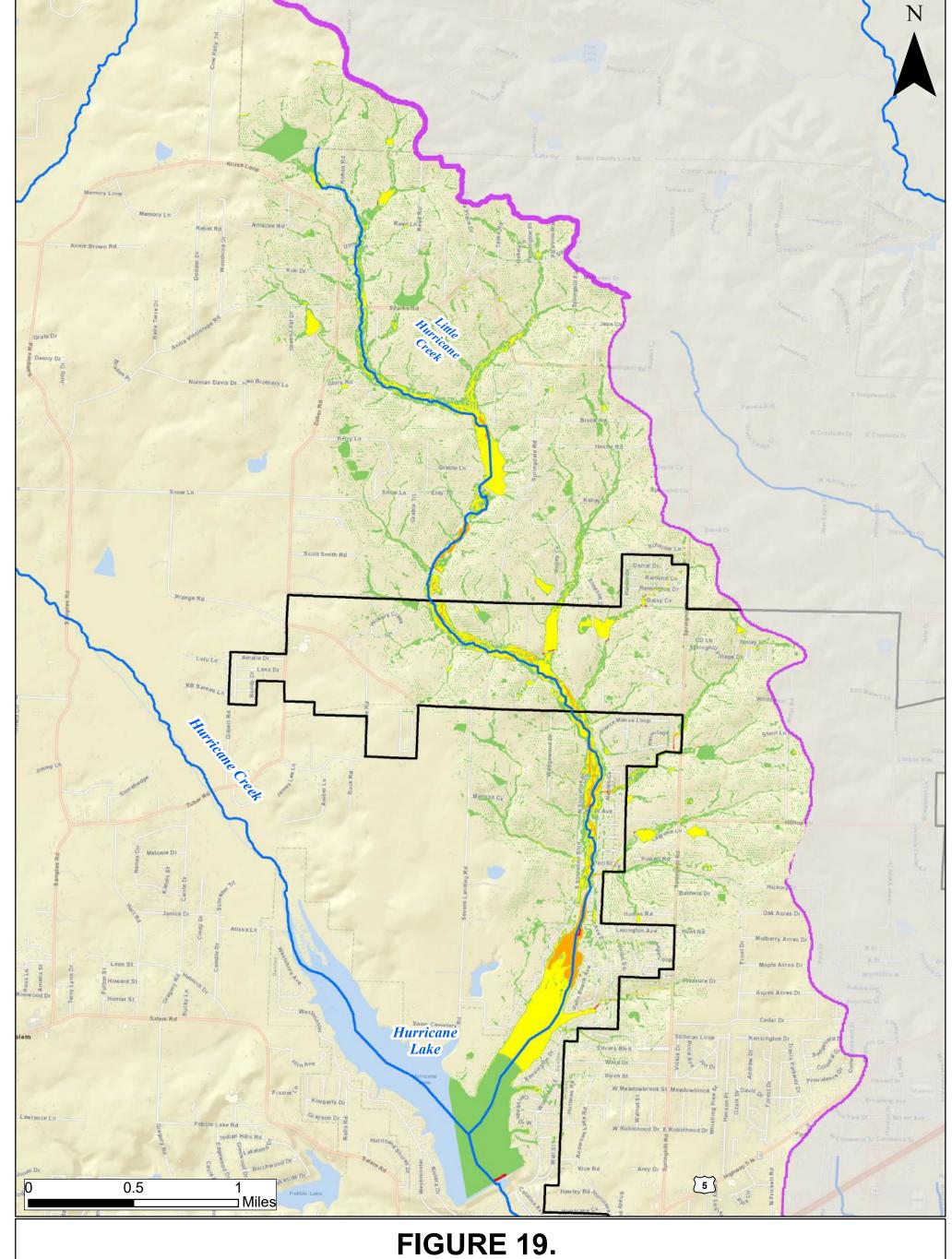


FIGURE 19. LITTLE HURRICANE CREEK BASIN 10-YEAR FLOOD SEVERITY INDEX







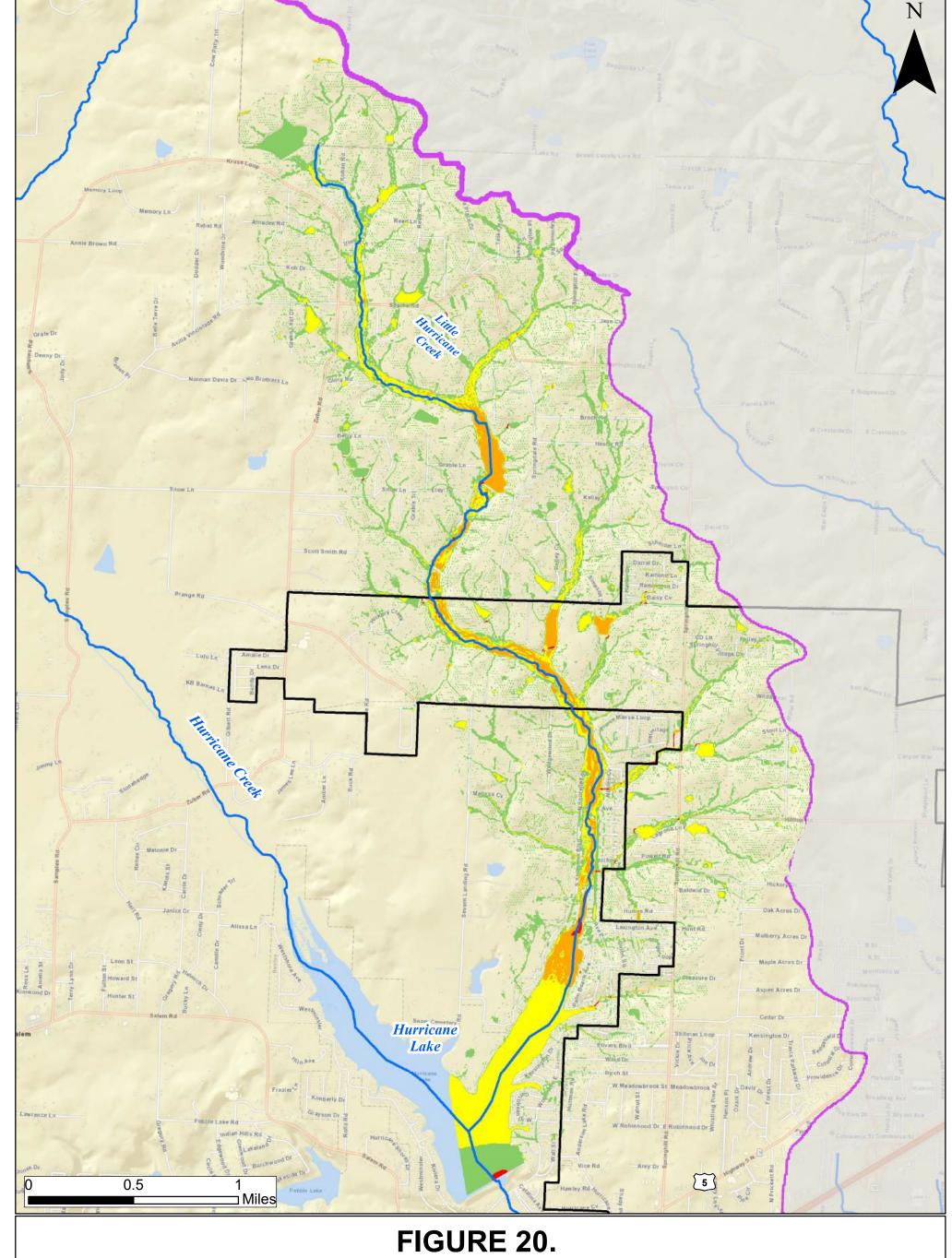
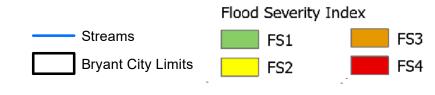
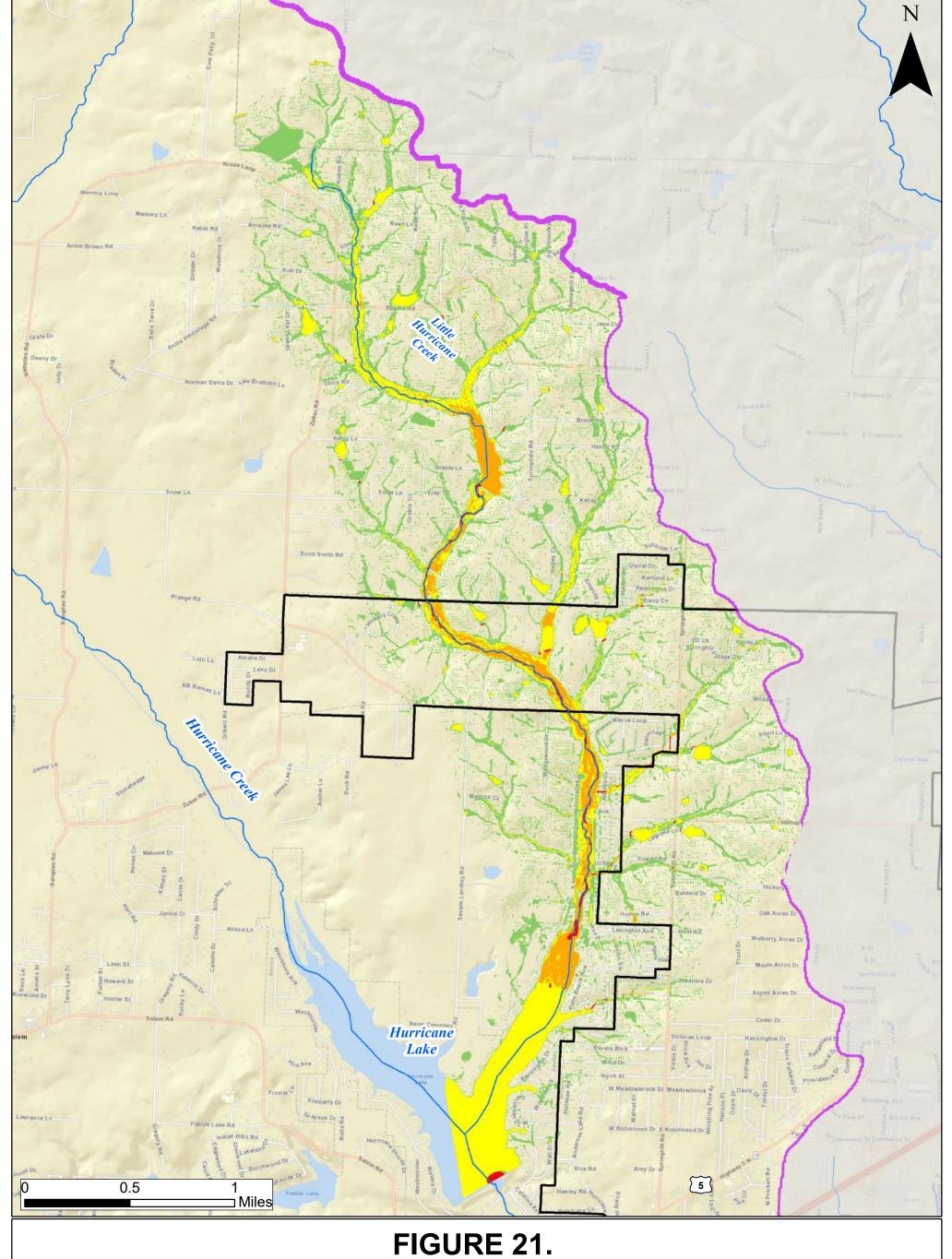


FIGURE 20. LITTLE HURRICANE CREEK BASIN 50-YEAR FLOOD SEVERITY INDEX





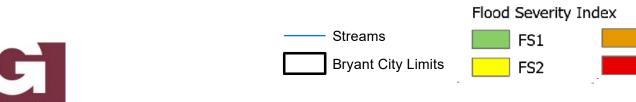




LITTLE HURRICANE CREEK **BASIN 100-YEAR FLOOD SEVERITY INDEX**

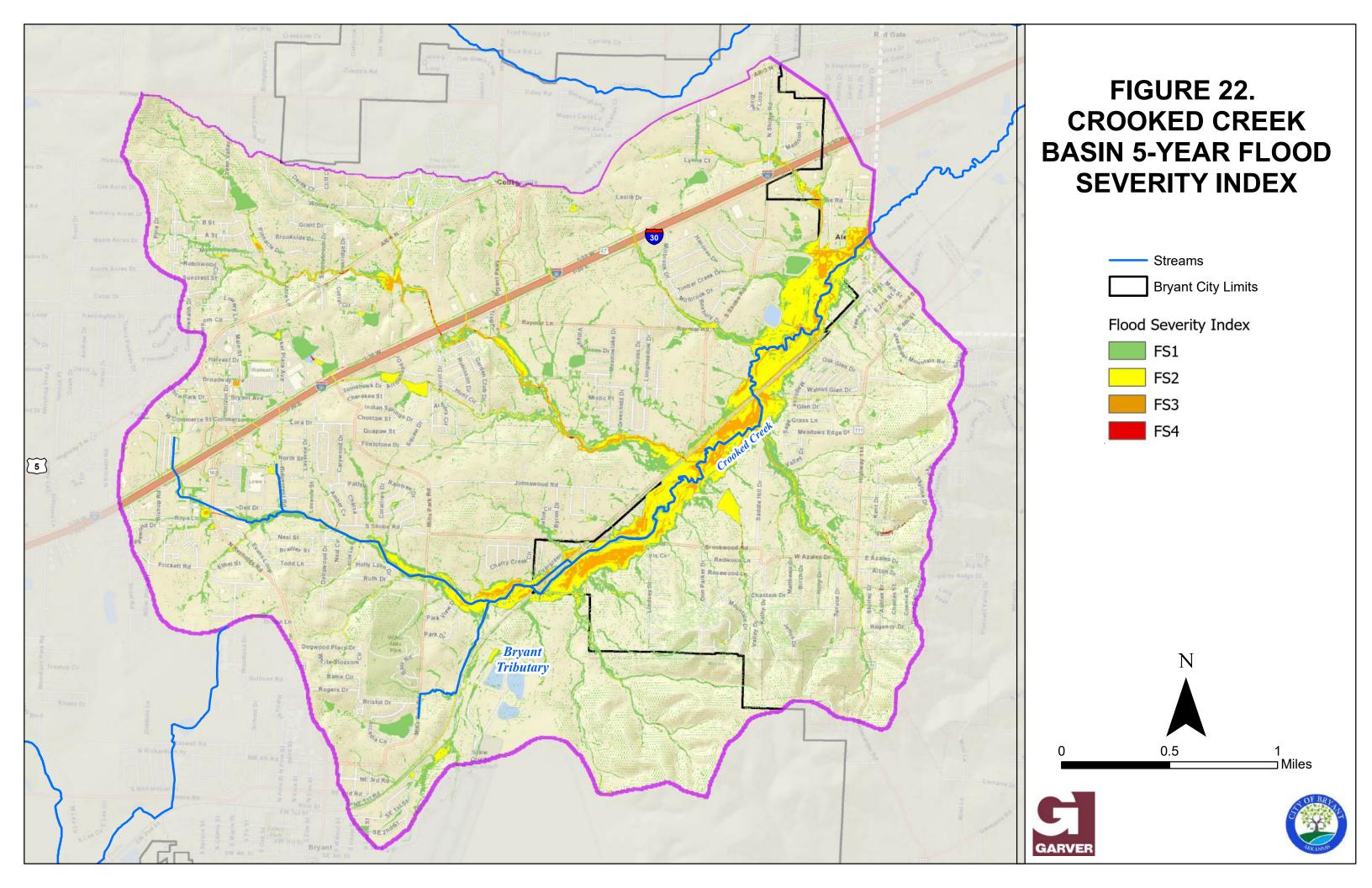
FS3

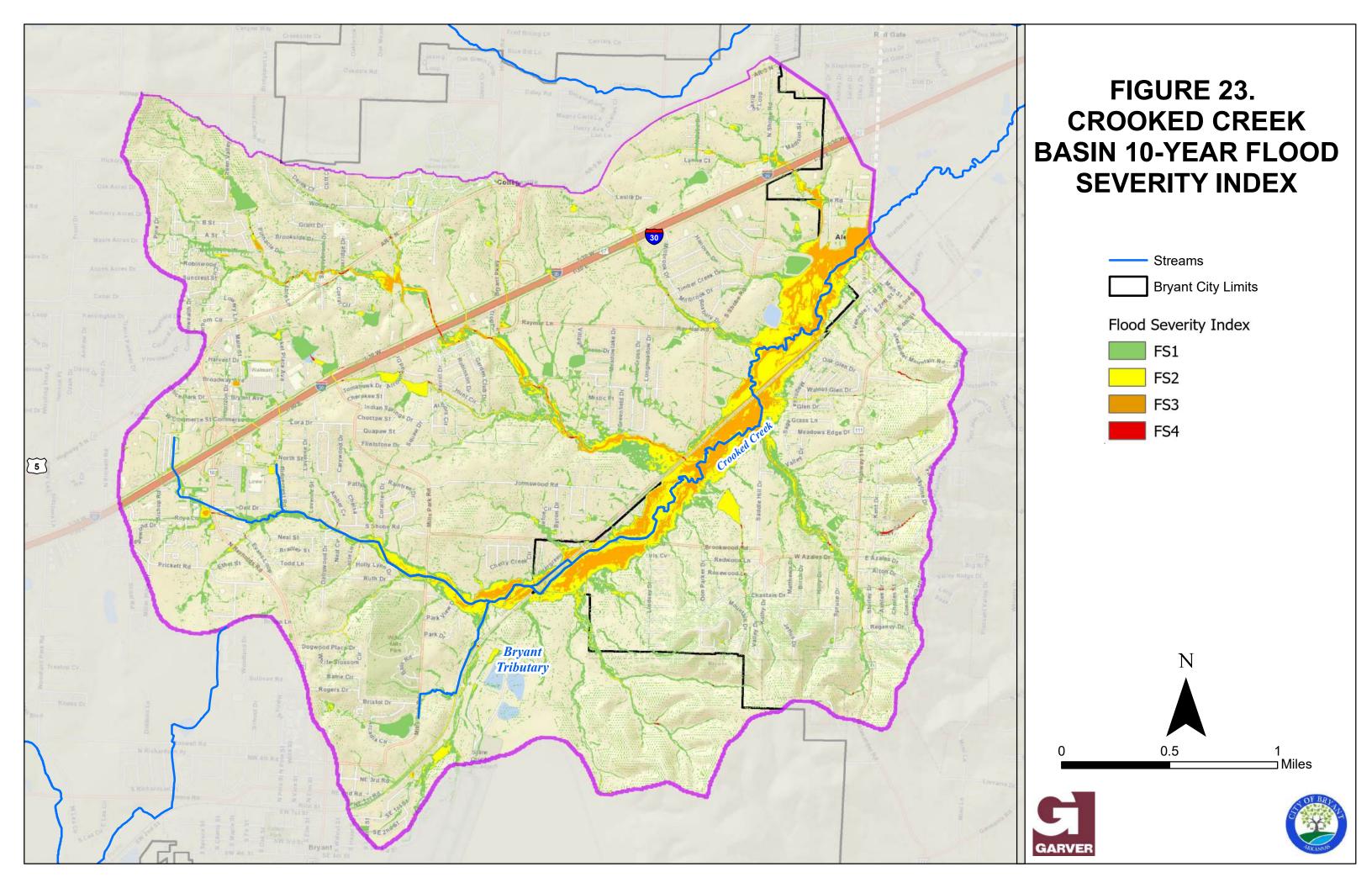
FS4

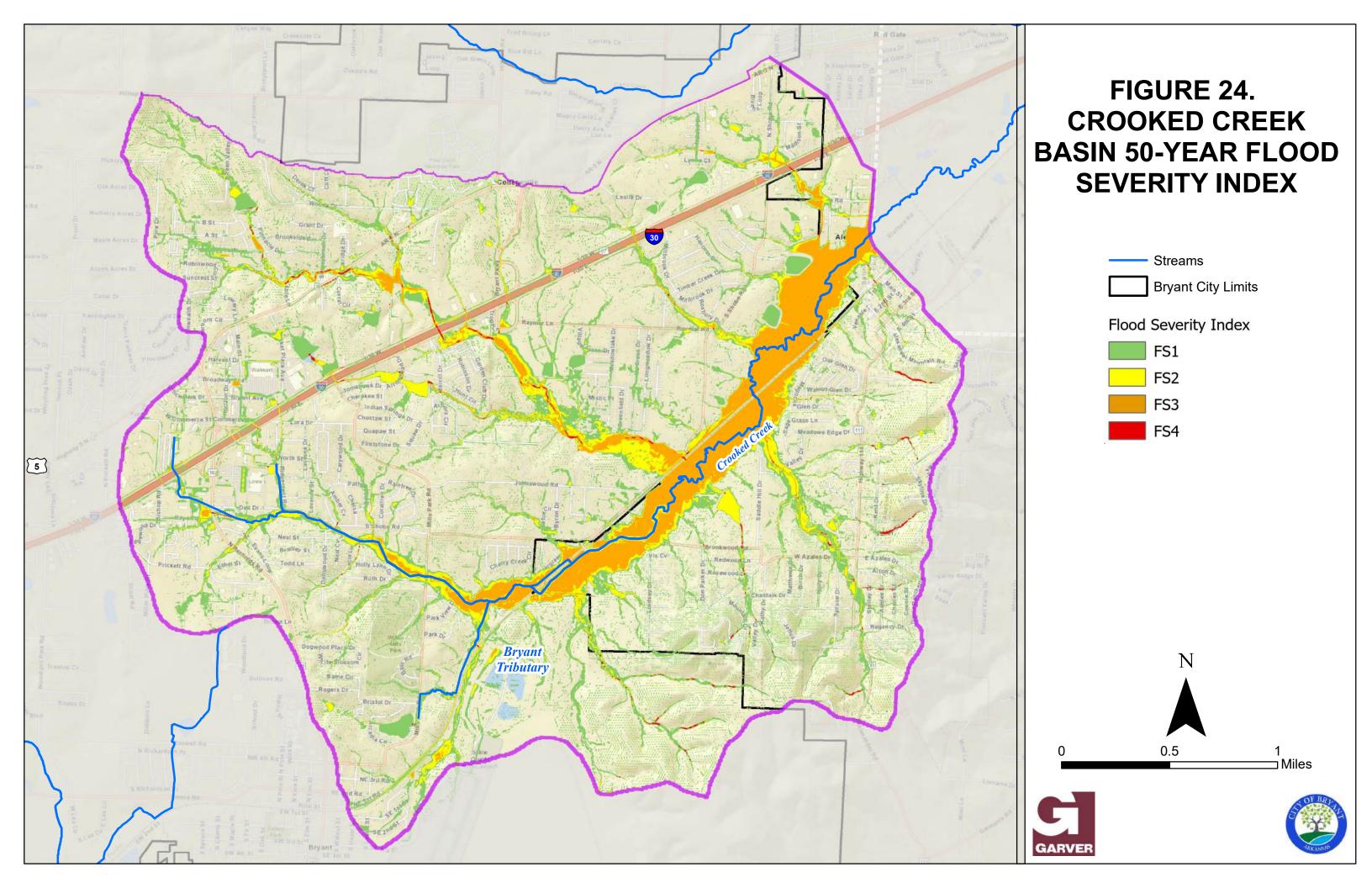


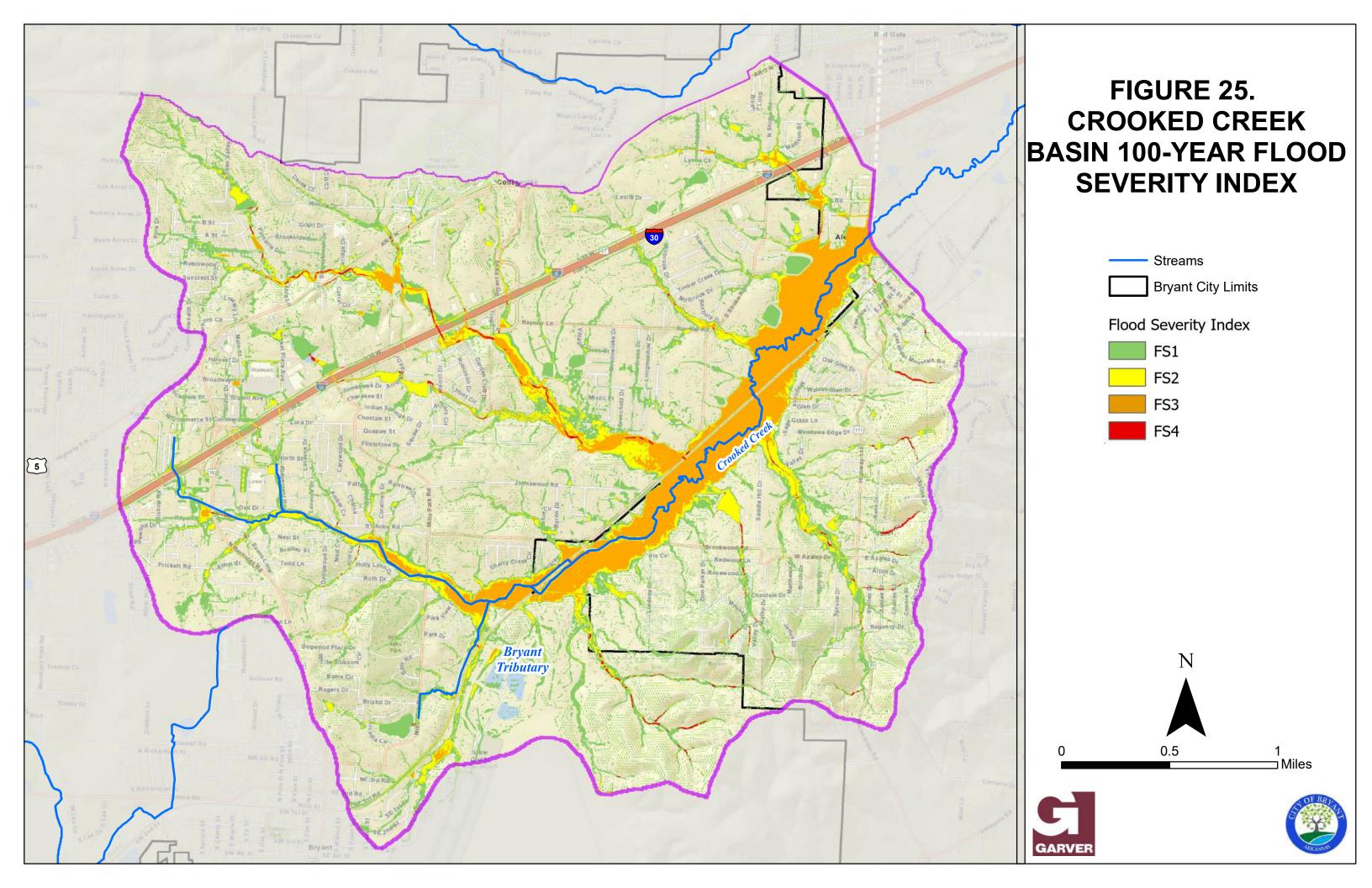


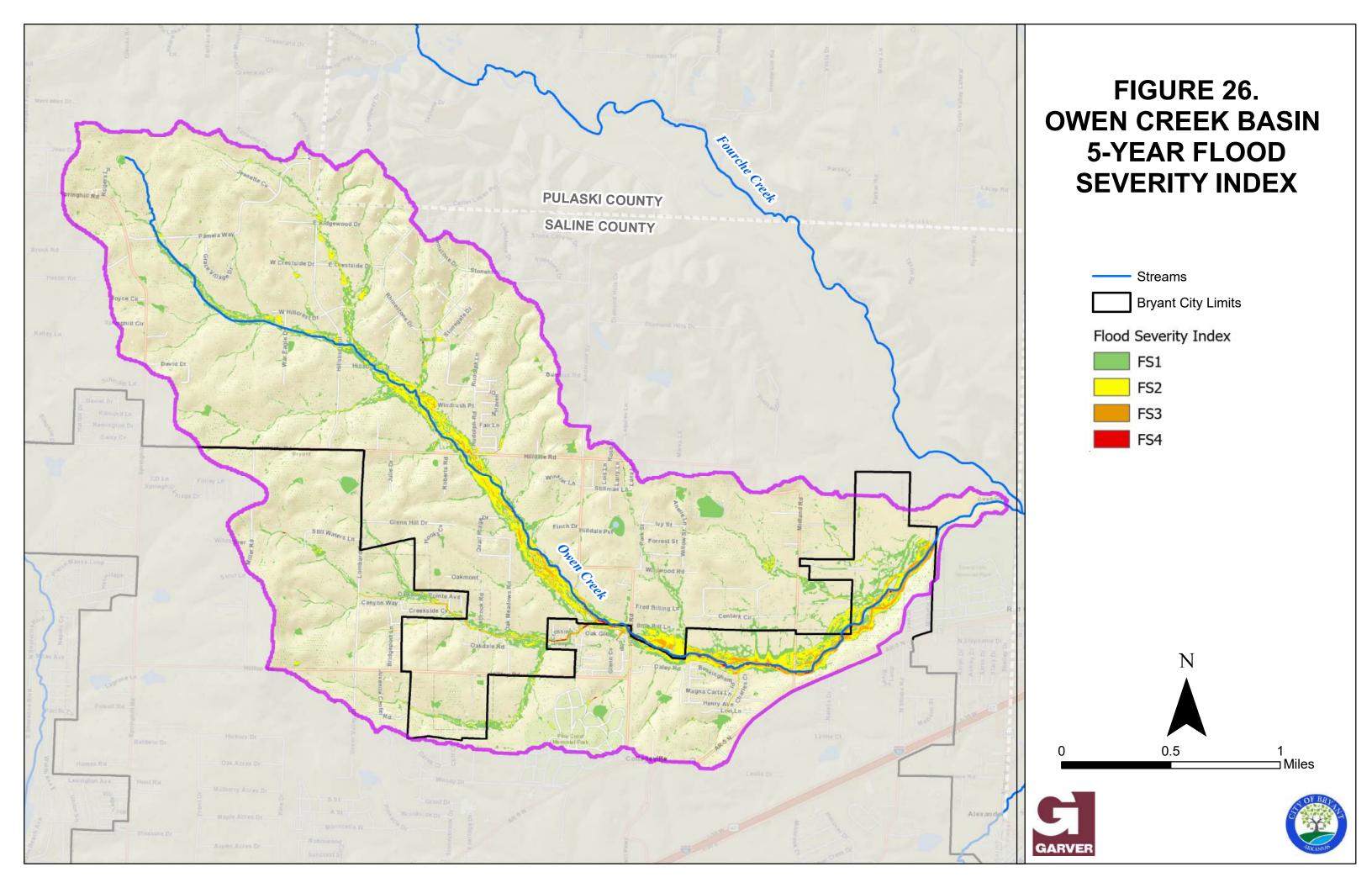


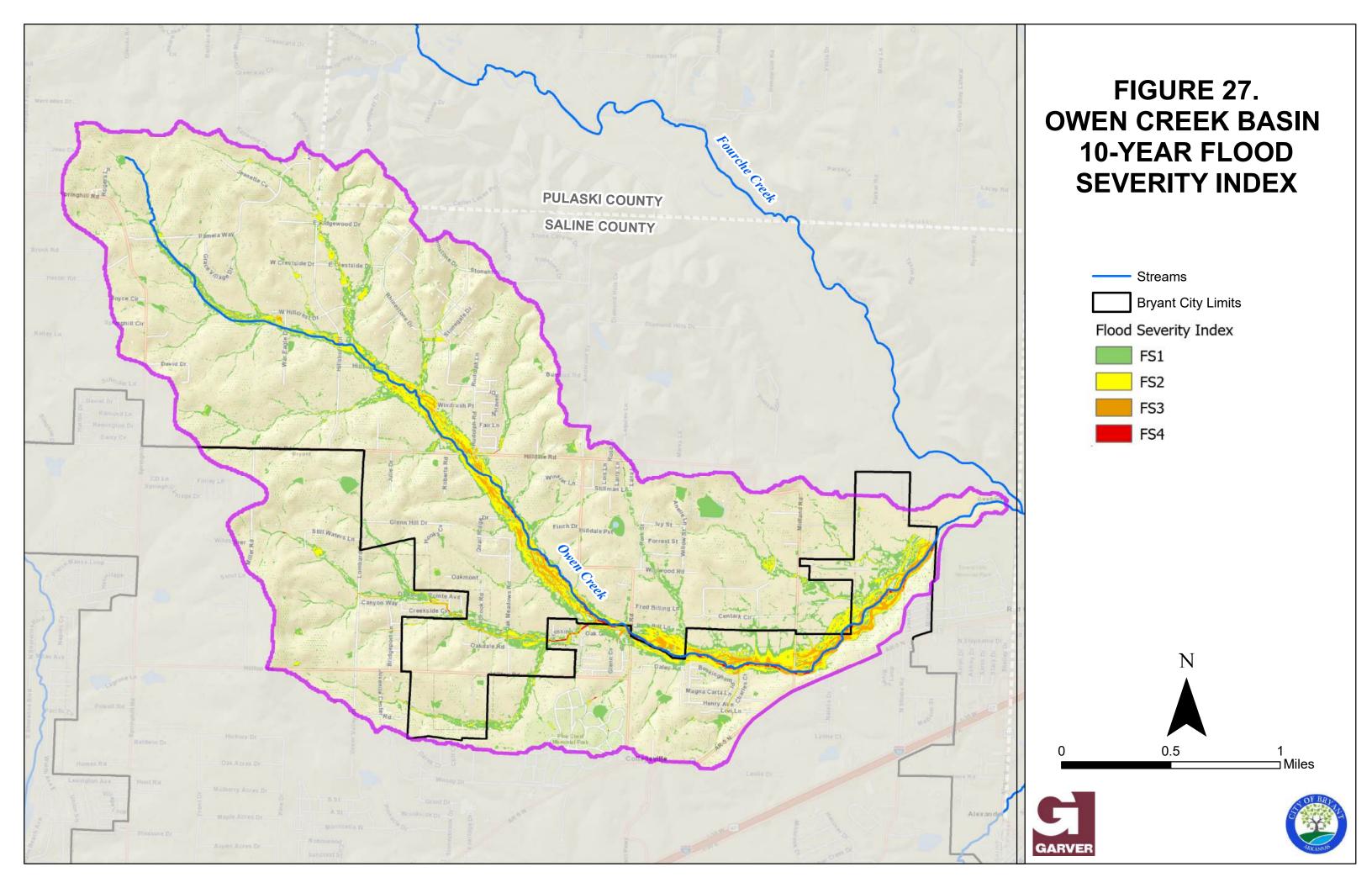


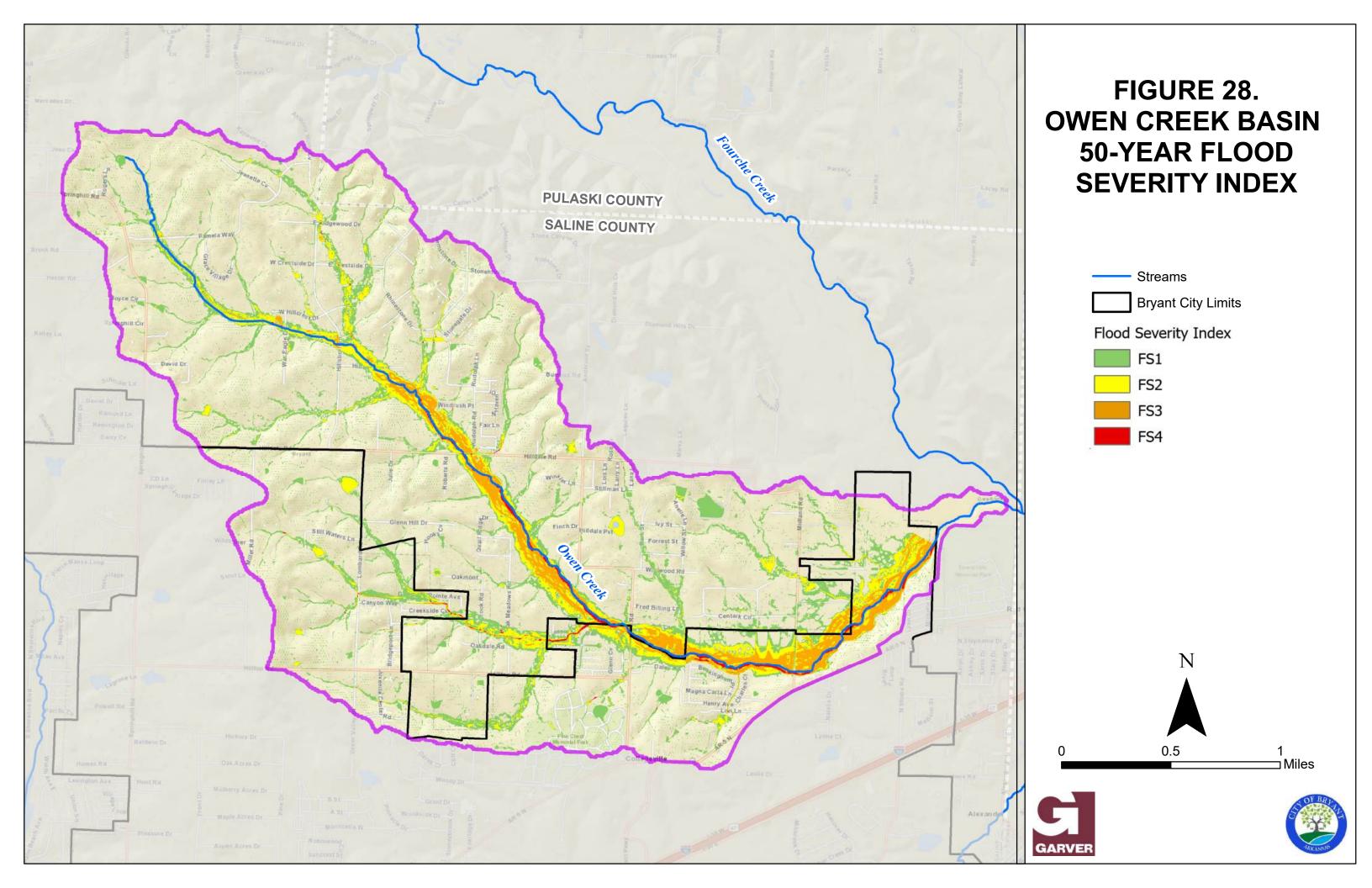


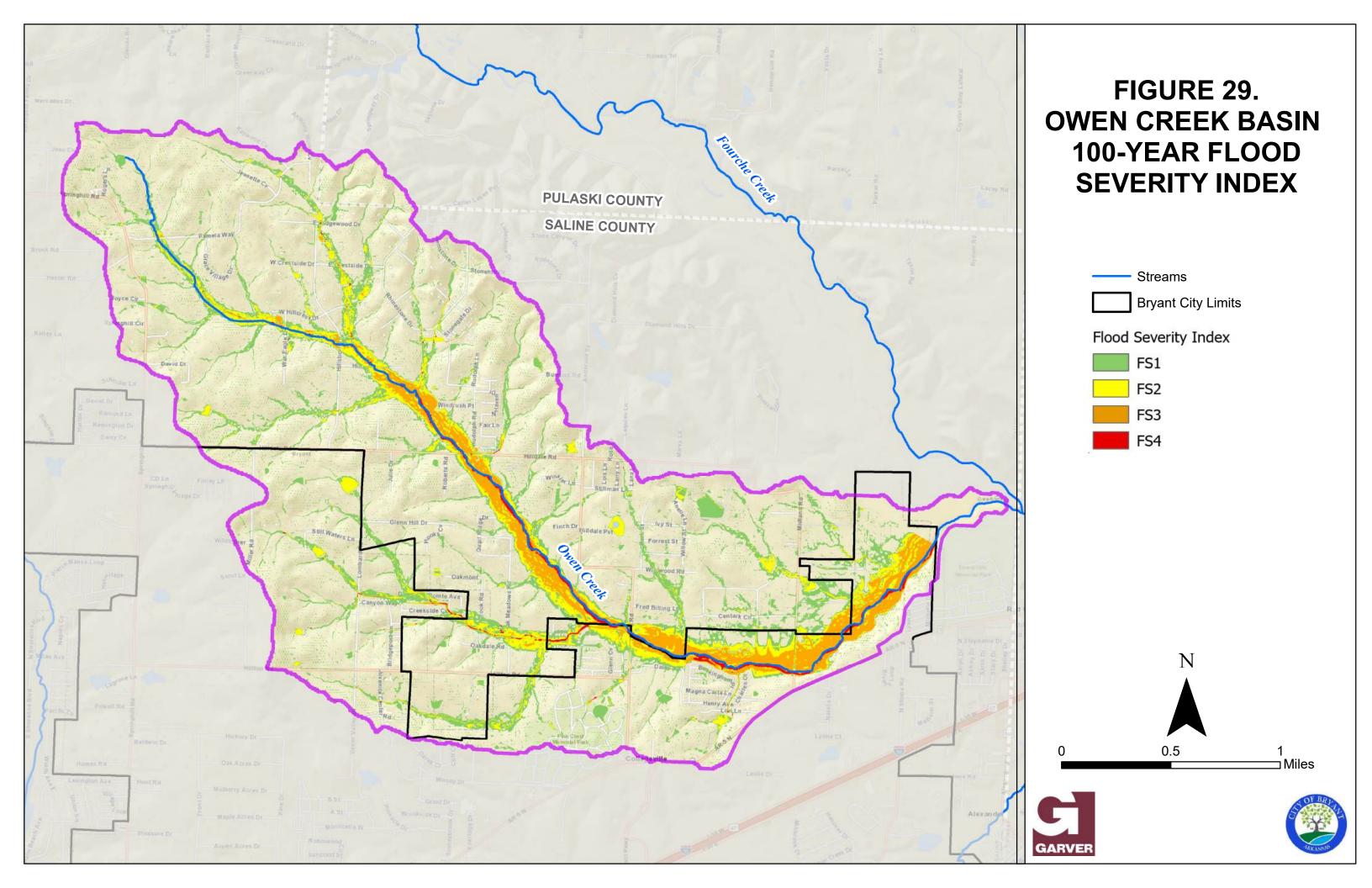














5.3 Areas For Further Study

The mapping provided in the previous section was reviewed to identify areas of concern. Locations within the flood severity mapping for all modeled storm events were reviewed against aerial imagery and lidar data. Parameters considered during the problem area identification process included the following:

- Roadway overtopping by any storm event;
- Inundation of home or other building by any storm event;
- Identification of drainage issue by resident comment;
- Documentation of historic flooding, as discussed in Section 3.1.1 of this report;
- Roadway or home/building located within a FEMA flood hazard mapped area.

If a location was initially identified by one or more of the parameters listed above, the area was then reviewed further to determine if it warranted further study. Initially, 38 locations were identified. These locations were provided to the City for discussion, including verification of potential drainage problems. After City verification, the list was reduced to 16 locations for further study. These locations are listed in **Table 20**.





Table 20. Identified Potential Drainage Problem Locations

| | | | | | | Sev | od erity dex | , | Re Con |
|----|---|---|--------------------|--|------|-------|--------------------|--------|----------------------|
| ID | Location | Stream Name | Basin | Potential Drainage Issue | 5 yr | 10 yr | 50 yr | 100 yr | Resident Comments |
| 5 | Sherwood Estates/ Northridge Ph 2/Forest Cove/Springhill Manor | Unnamed Tributary to Shoal Creek | Hurricane Creek | Neighborhood flooding | 1 | 1 | 1 | 2 | 7 |
| 6 | Forest Cove/Sunset Meadows | Shoal Creek | Hurricane Creek | Neighborhood flooding | 1 | 1 | 2 | 2 | 10 |
| 7 | Hidden Creek Drive | Shoal Creek | Hurricane Creek | Roadway overtopping; home flooding | 1 | 1 | 2 | 2 | 3 |
| 8 | Rodeo Drive | Shoal Creek | Hurricane Creek | Home flooding | 1 | 2 | 2 | 2 | 1 |
| 10 | Boone Road | Hurricane Creek | Hurricane Creek | Roadway overtopping; home flooding | 2 | 3 | 3 | 3 | 0 |
| 12 | Boone Road (near Richardson Place) | Boswell Creek | Hurricane Creek | Roadway overtopping; home flooding | 1 | 1 | 2 | 2 | 1 |
| 13 | Lea Circle | Boswell Creek | Hurricane Creek | Roadway overtopping; home flooding | 3 | 3 | 3 | 3 | 3 |
| 14 | Cynamide Road | Hurricane Creek | Hurricane Creek | Roadway overtopping | 0 | 2 | 2 | 3 | 0 |
| 18 | Meadowlake | Unnamed Tributary to Crooked Creek | Crooked Creek | Neighborhood flooding | 2 | 2 | 2 | 2 | 5 |





| | | | | | , | Sev | od erity lex | , | Re Cor |
|----|--|---|--------------------|--|------|-------|--------------------|--------|----------------------|
| ID | Location | Stream Name | Basin | Potential Drainage Issue | 5 yr | 10 yr | 50 yr | 100 yr | Resident Comments |
| 19 | Meadowlake | Unnamed Tributary to Crooked Creek | Crooked Creek | Neighborhood flooding | 1 | 1 | 1 | 2 | 0 |
| 21 | S. Shobe Road | Unnamed Tributary to Crooked Creek | Crooked Creek | Roadway overtopping | 1 | 1 | 2 | 3 | 0 |
| 27 | Hilldale Road N-S (near Hilltop) | Owen Creek | Owen Creek | Roadway overtopping; home flooding | 1 | 2 | 2 | 2 | 2 |
| 28 | Midland Road | Owen Creek | Owen Creek | Roadway overtopping | 0 | 0 | 1 | 1 | 0 |
| 29 | Oak Meadows\ Roman Heights\ Dawsons Pointe | Owen Creek Tributary | Owen Creek | Neighborhood flooding | 1 | 2 | 3 | 4 | 2 |
| 30 | Oak Glenn | Owen Creek Tributary | Owen Creek | Neighborhood flooding; home flooding | 1 | 2 | 2 | 3 | 6 |
| 32 | Richardson Place | Boswell Creek | Hurricane Creek | Roadway Overtopping | 1 | 1 | 1 | 1 | 2 |





6.0 Phase 2 Recommendations

The following tasks will be performed in Phase 2 of the CDMP:

- Detailed existing conditions hydraulic analysis of selected study areas;
- Development of improvement alternatives for identified drainage issues;
- Hydraulic analysis of improvement alternatives;
- Development of Capital Improvement Plan with project prioritization and conceptual costs.

The locations identified in Table 20 were grouped as applicable for modeling purposes in Phase 2. Table 21 lists the recommended models to develop in Phase 2. Phase 2 deliverables will include drainage study reports for each model listed above, along with conceptual layouts of the selected mitigation alternatives and planning level opinions of project costs.

Table 21. Recommended Hydraulic Models for Phase 2

| Stream/Location | Model Extents | Model Type |
|--|---|---|
| Shoal Creek | confluence with Hurricane Creek up to Kensington Drive | 1D HEC-RAS |
| Shoal Creek Tributary | confluence with Shoal Creek up to Kensington Drive | 1D HEC-RAS |
| Hurricane Creek | Highway 183 to Hurricane Lake | 1D and 2D HEC-RAS (Boone Road portion performed during Phase 1) |
| Boswell Creek | Confluence with Hurricane Creek to Boswell Road | 1D HEC-RAS |
| Meadowlake Subdivision | Meadowlake neighborhood | XPSWMM |
| Unnamed Tributary to Crooked Creek | Confluence with Crooked Creek to southwest corner of Meadowlake neighborhood | 1D HEC-RAS |
| Owen Creek | Confluence with Fourche Creek to 1,000 ft upstream of Hilldale Road (East-West) | 1D HEC-RAS |
| Owen Creek Tributary and Tributary A | Confluence with Owen Creek to upstream of Roman Heights Ave; Lombard Road | 1D HEC-RAS (downstream reach performed in Phase 1) |





Appendix A

Resident comments were collected through an online geoform from April 10 to May 22, 2022. The received comments are listed on the following pages.



| ID | Name | Email Address | Drainage Issue | Issue Frequency | Phone Number | Contact Address | Preferred Method of Contact | Repetitive Loss or Insurance Claims | Photo Release | Description of Issue x | Problem Area (if annilicable) | Neighborhood/Subdivision | Basin | 5yr FSI | 10yr 50yr FSI FSI | 100yr FSI | yr V 5yrl | D 10yrV | 10yrD 50 | rrV 50yrD | 100yrV 100yrD |
|-----|-------------------------------|-------------------------|---------------------|---------------------|--------------|---|-----------------------------|-------------------------------------|---------------|--|-------------------------------|------------------------------|--------------------|---------|----------------------|--------------|------------------|---------|----------|-----------|---------------|
| 170 | Katherein Myres | bananion@gmail.com | Road | Every time it rains | 8186249632 | 3412 Village Green Drive, Bryant, AR 72022 | Email | No | Yes | We recently moved to Village Green Drive off Raymar Rd. The tw storm drains in front of the house next to ours and the house across the street from it do not drain, and the street floods there every time it rains, even a little bit. I have attached photos from | 20552 34.62567698 18 | Meadowlake | Crooked Cree | k 1 | 2 2 | 2 | 0.4 1.5 | 5 0.4 | 1.6 | 6 1.9 | 0.7 2.0 |
| 171 | Kristin Higgins | khiggins@uada.edu | Yard | Every heavy rain | 4797996058 | 406 Sanders Lane Bryant, AR 72022 | Email | No | Yes | today and from March 22nd Water overtops storm ditch on Sanders Lane and flows west into our yard, submerging the southern half of our yard to the back of our properly line during most heavy rains. Water has been as high as three inches along our privacy fence. I contacted the city the last time this happened this year. The city's stormwater employee said the culvert pipe under the neighbor's driveway is too small to handle the volume of stormwater. This causes water to dam up ar overtop the ditch. | 37767 34.59106588 N/A | Bryant Meadows | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 172 | Pris Sinclair | Sinclairpris@gmail.com | Yard | EveryMulti | 501-912-8759 | 701 Ruth Drive, Bryant | Email | No | | There is NO drainage on Ruth Drive so my yard and my neighbor gets flooded every time it rains. The road slopes down to our yard and the rain water floods our yards to the point that we cannot md -92.4849 until it drys up. My neighbors installed a French drain but it doesn help. | 97081 34.61045254 23 | Park Hill | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 0.0 |
| 173 | GAREY B SCOTT | topretired@gmail.com | Road | EveryMulti | 8702675348 | 2124 Cherry Creek Circle, Bryant, AR 72022 | Email | No | | As I do my walking around Cherry Creek Circle, i've notice several drainage issues where the water seems to be running at all times. Some of this is drainage issues, but i believe the city has several water leaks in the street | 40672 34.61086703 N/A | Cherry Creek neighborhood | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 0.0 |
| 174 | Amy Zom | Amsmall2002@yahoo.com | HouseBusiness | EveryMulti | 501-519-2177 | 2403 Carywood Dr Bryant 72022 | Email | No | | My property & home is inundated with storm water drainage from Richland Park in the front & from Richland Park & Laverne from the back. My entire property is wet year round. My home has flooded more times than we can count now. The last time, there was knee deep water IN MY HOUSE. There is a permanent ditch cutting across the entire middle of my yard running into the neighbor's yard where It stays blocked so there's always stagnant water in my yard. The water is toxic & always has an oil sheen even when flowing. The ground is toxic from all the runoff just over the last 20 years that I've lived here. All of my food gardening has to be done in risade bade as to avoid the toxic soil. We constantly fill sinkholes & now there's an 8' deep pit in my yard that's starting to sink the ground around. If The city has already destroyed my curtiside lawn. I'll NEVER be able to mow it again because it's full of #2 gravel! They dug this hole 2 weeks ago & haven't been bac! I have no faith in you. | 05948 34.61624435 37 | Carywood/Raintree Acres area | Crooked Cree | k O | 0 0 | 0 | 0.0 | 0.0 | 0.0 | 0 0.0 | 0.0 0.0 |
| 175 | Thelma P. Poole | thelmapoole@gmail.com | HouseBusiness | Every5 | 5018375115 | 1721 Augusta Cove | Email | Yes | | I see a lot of infrastructure for storm water drainage put in place in the form of underground pipes. The ditches and holding areas that storm water spills out into are often ignored for long periods of time allowing weeds and trees to grow and prohibit flow thus backing up the water. A prime example is between Augusta Cove and Hwy 592.5084 Also, a few years ago, the ditches behind the Hidden Creek area were not kept cleared and it caused the water to build up in the deep cemented bridges and even knock the railing over. Several houses were flooded. | 46226 34.62062234 5 | Forest Cove | Hurricane Creek | 2 | 2 4 | 4 | 4.8 2.4 | 4 5.2 | 2.6 | .1 3.0 | 6.4 3.1 |
| 176 | Chalsie Sublett | Thesubletts@yahoo.com | Yard | EveryMulti | 501-529-2169 | 807 Allyson Avenue Bryant Ar 72022 | Email | No | | We were told our neighbors have a city drain in their back yard. our yard is supposed to slope and drain into that but it floods our side yard and back yard every time it rains. There is a drainage issue here for sure | 665745 34.58764024 N/A | Bryant Meadows | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 0.0 |
| 177 | Paula Power | Paulajpower56@gmail.com | Yard | EveryMulti | 903-497-6083 | 2313 Carywood Bryant AR 72022 | Email | No | | Storm water comes over curb into yard causing the yard and curb to continue to sink. Storm drain is close but most water doesn't get -92.4893 there because it collects and flows over sunken curb | | Carywood/Raintree Acres area | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 0.0 |
| 178 | Linda Zehner Alindria Jordan | lady.lz@att.net | Yard HouseBusiness | EveryMulti Every2 | 501-454-2523 | 1300 Crossing Loop, Bryant AR 72022 | Email Email | No | Yes | West & South Lea Circle property and street drainage & flooding. 92.5084 We purchased a new construction home Oct 2016 (1300 Crossing Loop), Approx 6mths later, April 29, 2017, we experienced major flooding in our yard and home. Playnt FirenRescue were called to the scene that night. We were displaced for 3 days. We were told this was a 100 year flood and debts clogged the creek. Residents in the older phase mentioned knowing of flooding issues. One went to the City about concerns when they learned houses would be bullt. April 17, 2019 our home flooded again. We repaired the fence that was knocked down and cleaned the floors again. May 8-92.4813 breakwary on one side and an extra opening on the other to release water into the creek. May 29 backyard flooded. On May 18, 2021 backyard and home flooded Each time we estimate at lease 2ft in yard. Water was come above my knee. KTHV measured approx. 35ft useling water in the backyard based off waterline on fence in 2021. I've been in contact with CorpEng & City. | | | Creek Owen Creek | 3 | | | | | | | 3.3 1.8 |
| 180 | Stephanie Guzman | stephbrisa12@gmail.com | Yard | EveryMulti | 5014721736 | 1316 Crossing Loop, Bryant, AR 72022 | Phone | No | No | Our neighborhood has unfortunately been the victim of severs flood events within the 2 years of owing this home. The creek this runs directly through the neighborhood has flooded or nearly flood every time there is more than just a few inches of rain. The houses -92.4807 in the back half of our neighborhood closest to the creek flood severely, while the waters have neared our home up to the garage door. | 78186 34.64481951 30 | Oak Glenn | Owen Creek | 0 | 1 2 | 2 | 0.0 0.0 | 1.7 | 0.8 2 | 8 1.5 | 3.1 1.8 |
| 181 | Felicia Hayes | mizhayes1@yahoo.com | HouseBusiness | EveryMulti | 5019525088 | 1407 Oak Glenn Court Bryant, AR 72022 | Email | Yes | No | Flooding almost every time it is heavy rain in Oak Glenn neighborhood. Especially in the crossings area. The mayor, and even local news reporters have been out several times. This hasn damaged our property but it has our neighbors a few times. | 06359 34.64506317 30 | Oak Glenn | Owen Creek | 0 | 0 0 | 1 | 0.0 0.0 | 0.0 | 0.0 1 | .0 0.8 | 1.1 1.1 |
| 182 | Lisa Kennedy | lme1977@hotmail.com | Road | EveryMulti | 5735291962 | 5860 Pierce Manse Loop, Benton 72019 | Phone | No | No | There are a few spots on Springhill Road that always collect wat during heavy rains. The road is so busy, it is dangerous to drive into the other lane to avoid the water but it can be dangerous to drive into the water. One spot is on the northbound lane of Springhill between the storage unit complex and the side entranch of Hurricane Lake Estates. Sorry I don't remember the precise location; I drive the road so often it becomes a blur. The second area is the dip on northbound Springhill near the Northiake intersection. That often is so bad that safety cones/signs have to be out out. | 02831 34.63404162 N/A | Springhill Acres | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 0.0 |
| 183 | Jared Butler | Jbutler1975@yahoo.com | HouseBusiness | EveryMulti | 5015803483 | 49 Neal Cove | Phone | No | Yes | These photos were taken on April 12, 2022, one day after a thunderstorm passed through on 4/11/22. The interior pictures ar from our basement, a small amount of water after a night of running fans and de-humidifier. The discoloration of the basement floor is a result of a lot more rain and water intrusion after lengthly amounts of rain. We put in a French drain to alleviate this about 6 years ago, but I suspect is cologed at this point. One of the bigger problems as we see it is the busted up concrete in the middle of the street on Neal Cove and in front of our house, see attached photo of busted concrete on storm drain in front of 49 & 51 Neal Cove. This causes excess water to run beneath our foundation where water can be seen (attached photos) draining under our back patio. I'll be happy to submit additional ones following heavier rain, expected to occur 4/12-4/13 | 95066 34.61119719 N/A | Bryant Oaks | Crooked Cree | k O | 0 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | 0 0.0 | 0.0 0.0 |

| 18 | 14 | Lisa Mundy | danzrs3@att.net | HouseBusiness | Every5 | 501-786-4130 | 4 Arcadia Circle, Bryant, 72022 | Email | Yes | No | When the city laid new asphalt on the road, the asphalt now butt up to my driveway. My neighbor noticed they had also blocked they the drain. They came back to cut away from the drain. With the culvert now under asphalt, water uns doom my driveway instead to the drain. The first major event of flooding was May 2017. Water built up at our garage door and was also along the side of the house. Since then, we had a drain put in at the bottom of the driveway that connects to the small concrete runoff my dad built many years ago. Since 2017, we had a major issue in May 2021 A true flash flood that came in from the side of the house where the addition of the downstairs bedroom meets the original flooting (water coming in from under a tub). Water also was able to come in under the garage door. We had at least 2 inches of water downstairs. (Lon send photos later if needed. I do not have an of the water run-off as it has been at night.) | -92.48364806 | 34.59945363 | 35 Bloomfield Hills | Crooked Creek | ς 0 | 0 | 0 | 0 (| 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 |
|----|--------|-------------------------------|---|---------------|--------------------------|--------------|---|----------------|----------|-----|--|---|----------------------------|----------------------------------|-------------------------|-----|---|---|-----|---------|-------|-----|-------|---------|-----|
| 18 | t5 Cas | isey Callahan-Jarvis | caseyscrap@hotmail.com | Yard | EveryMulti | 3105254063 | 1302 pleasant pointe Cir | Email | No | | Any time it rains the backyard floods. It takes days to dry up. It's basically a small river in the yard that ends on a giant puddle at or end of the yard. Neighbors are having the same issues with the ones at the back of the road having to open up their backyard gates on theirs houses don't flood. | -92.49724124 | 34.58339329 | N/A Pleasant Pointe/Cedanwood | Hurricane Creek | 0 | 0 | 0 | 0 (| 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18 | 37 An | ngela and John Hall | ar_lowery@yahoo.com | HouseBusiness | EveryMulti | 5019026615 | 1809 Pleasant Pointe Crl. Bryant Ar 7202 | Phone | No | Yes | , My name is John Hall, I live at 1809 Pleasant Point in the Pleasant Point subdivision in Bryant At. My wife and I moved in our resident Deo of 2015, since moving in our residence we have experienced extensive drainage issues in our back yard along wis several other neighbors. We had a French drain installed hoping eleveste this issue, but was advised that we needed to contact a city official in hopes that we can come up with a resolution to this problem. Since mowing in we have experienced major problems flooding which has damaged our storage unit, mosquitoes, havin to treat one of our dogs for heart worms and with vet bills in the thousand of dollars. I'm contacting you to see if there is anyway we can please receive help on resolving this problem. We look frows to hearing from you. I can be reached any time at 501-902-6615. | -92.4985 | 34.58152 | N/A Pleasant Pointe/Cedarwood | Hurricane Creek | 0 | 0 | 0 | 0 (| 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18 | 18 | Jacob Brady | Jacobbrady027@gmail.com | Yard | EveryMulti | 5012139928 | 705 Bryant Meadows Dr. Bryant, AR 72022 | Phone | No | | Several inches of standing water in backyard after any amount o rain. Water flowing into streets contains in large puddles at entrance to Bryant Meadows and Martin streets off Griffith. | | 34.58868097 | N/A Bryant Meadows | Hurricane Creek | 0 | 0 | 0 | 0 (| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18 | | .ance N Bonvillain | bovie2002@yahoo.com | Yard | EveryMulti | 5013267814 | 1520 Pleasant Pointe Circle | Email | No | Yes | Every year when we get a heavy rain the road and our yard (neighbors yards) floods. You can see an example on this facebook link https://www.facebook.com/karen.borwillain/videos/101574061704 278 This has occurred multiple time a year over the past 12 years of thing here. There are time that I feel that I F we do not take acido to open our privacy fence gate and clear the debris from the chal link fence in the back yard that the water will raise high enough the get into the house. I spoke several years ago with the city engineer. He indicated (and had a crew come out) that the out! (which is NOT on city land) needed to be cleaned out. The past wo years that I have reported this to the current administration thonly response that I received was that they could NOT GO ON To private land to clear the debris from the outlet. | n n -92.49757627 o t e o | | | Hurricane Creek | 0 | | | | | | | | 0.0 | |
| 19 | 10 L | ance N Bonvillain | bovie2002@yahoo.com | Yard | EveryMulti | 5013267814 | 1520 Pleasant Pointe Circle | Email | No | Yes | additional informationfrom todays rain 4-13-2022; I have a video of it but it will not load Water is flowing from Raymar Rd to Village Green Drive through | | 34.58106618 | N/A Pleasant Pointe/Cedarwood | Hurricane Creek | 0 | 0 | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | н н | lerbert and Shirley Keller | shirley_105@hotmail.com | Road | EveryMulti | 501-607-8996 | 3502 Village Green Drive Bryant, AR 72022 | Phone | No | Yes | water is lowing iron in daymar No to vising Getern Drive inough neighboring property. Our yard as well as both neighbors yard or each side experience water flow and backup water from this issult the water continues to flow to the street of Village Green Drive where it floods the street as the street drains are not working properly. The flood water then flows over the sidewalk to a ponol located approximately 200 feet from the street. The water has caused the concrete of the street to buckle and crack. | 92.4682382 | 34.62570234 | 18 Meadowlake | Crooked Creek | ς 1 | 1 | 2 | 2 (|).3 1.2 | 0.4 | 1.4 | 0.6 1 | .7 0.6 | 1.8 |
| 19 | 12 | Nate Martin | nmartin@wddarchitects.com | Road | EveryMulti | 5013766681 | 1509 Quail Ridge Dr Alexander AR, 72002 | Phone | No | Yes | The entrance to the Oak Meadows subdivision is blocked by floodwaters after 3" of rain on 4/13/22. Regular flooding is also destroying the existing culverts at Oak Meadows Rd crossing. Increased stormwater appears to be coming from the recent phases of Magonial Village Subdivision to the west, and has mad this problem worse in the past several months. | -92.48479445 | 34.64463305 | 29 Oak Meadows | Owen Creek | 1 | 1 | 2 | 2 (| 0.7 0.6 | i 1.0 | 0.9 | 1.4 1 | 1.6 1.6 | 1.9 |
| 19 | 13 C | Caroline Robertson | Cianna4hym@att.net | Yard | EveryMulti | 5018374755 | 719 Pattywood Dr. Bryant | Email | No | Yes | When we get a fair amount of rain. Mainly my backyard runs like fast moving creek. It has weaked the topsoil up to the foundation on one side of the house while on the other the topsoil has washe out and my foundation is uncovered. Water gets in my garage and I am praying it doesn't start coming through the top of my foundation. I can not put up a new privacy fence because of the water issues. | -92.4864425 | 34.61679471 | | Crooked Creek | c 0 | 0 | 0 | 0 (| 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | 14 | Jan Butram | janteachu@msn.com | Yard | EveryMulti | 5014089786 | 1004 Silktree Dr | Email | No | Yes | Creek/drainage line that runs through the back of our property overflows into our yard with each heavy rai Stormwater drain ditch on the south side of the property does no | | 34.61594659 | 36 Carywood/Raintree Acres | Crooked Creek | 0 | 0 | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 |
| 19 | 15 | Steven Long | Long.stevene@outlook.com | Yard | EveryMulti | 5012496905 | 3024 Cedar Park St | Email | No | Yes | Stormwater drain ditch on the south side of the property does no properly distribute rainwater, leading to flooding of the entire road obscuring it from view, as well as serious flooding of the front an backyard. Poses a major threat to homes foundation | . 00 54050500 | 34.6230372 | 4 Sherwood Park/Sherwood Estates | Hurricane Creek | 0 | 0 | 0 | 0 (| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | | Youngbeom Ahn | Youngbeom.ahn@gmail.com | Yard | EveryMulti | 9086162135 | Youngbeom.ahn@gmail.com Heoma6602@gmail.com 2400 east meadowbrook street Bryant | Email Email | No No | Yes | Yard The creek that runs beside my house over flows and causes | | 34.64488691 34.62445996 | | Owen Creek Hurricane | | | | | | | | | 0.0 2.0 | |
| | | Joyce Koozer | brandyhelton9@icloud.com harp4711@gmail.com | Yard Yard | EveryMulti EveryMulti | 469-471-5608 | ar 72022 2805 Barbara Court Bryant, Ar. 72022 | Email | No No | | Following the rains of 4-11 through 4-13, large amounts of runoft from the vacant property that borders the backyard of my house came through and left standing water in my yard for days. This van ongoing problem. I walked the area with a neighbor and there all ditch that appears to drain some of the runoff, but not nearly all it. This standing water, both in the ditch and my yard, is a haven for mosquitoes at the least. Is there something the city can do the will help this problem? | -92.46060805 it | | | Creek Crooked Creek | | | | | | | | | | |
| 19 | 19 | Lisa Roberts | Lisafrognurse@yahoo.com | Road | EveryMulti | 501-786-8425 | 6118 Oak Meadows Rd , Alexander, AR | Email | No | Yes | Hilliop Rd between Bryant Partway and Oak Meadows Rd gets rushing water over the roadway in 2 separate places with heavy rainfall making it dangerous for traffic to cross. Also, our road ha a drainage ditch dug, but it still overflows at this area making the road impassible. As noted on 4/13/22. | 1 -92.48234827 | 34.64253341 | 31 Hilltop Rd | Owen Creek | 0 | 0 | 1 | 1 (| 0.0 0.0 | 0.0 | 0.0 | 0.4 | 0.6 0.4 | 0.8 |
| 20 | 10 | Langdon Jones | Buhjonesband@gmail.com | Yard | EveryMulti | 903 286 5117 | | Email | No | Yes | When a big rain comes, my back yard (3508 Village Green) flood all the way up to the back porth. My next door neighbors have a river through their yard. My street and sidewalk are entirely unde water every time it rains heavy just one house over. Please come check out! Covert running from the roundabout to the creek is overflowin- | -92.46816793 | 34.62569429 | 18 Meadowlake | Crooked Creek | 2 | 2 | 2 | 2 (|).4 1.5 | 0.4 | 1.7 | 0.6 1 | .9 0.7 | 2.0 |
| 20 |)1 | Tracy kirby | Kirbybills@att.net | Yard | EveryMulti | 5012136874 | 812 hilldale rd Alexander ar72002 | Email | No | Yes | Covert running from the roundabout to the creek is overflowing with heavy rainfall's because of the debris inside of it it needs to be cleaned out | e -92.4752022 | 34.64428088 | 27 Hilldale Road | Owen Creek | 0 | 0 | 1 | 2 (| 0.0 | 0.0 | 0.0 | 2.1 1 | 1.2 2.6 | 1.5 |
| 20 | 12 | Dianne Falls | Fallsd47@sbcglobal.net | Yard | EveryMulti | 5015390183 | 3858 Patriot Cove Benton Ar 72015 | Email | No | | Flooding in my backyard. Paying someone to fix the flooding will not help. The ditch on Boone road next the Legacy Village need be deeper for the runoff from the yard | o-92.54062379 | 34.59828448 | N/A Outside City Limits | Hurricane Creek | 0 | 0 | 0 | 0 (| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20 | 13 | Judy Parson | Judyp.tab2@gmail.com | Yard | EveryMulti | 501 681-5839 | 3823 Commonwealth Drive Bryant | Mail | No | | The water drains straight into my front yard which faces Commonwealth (3823) and flows into the back so there's barely any real plantable soil back there. It seems to pool in front and IV added a French drain but I don't think It helps much either. The front yard stays constantly musty & soggy. I'm 75 yrs. old, been here 4 yrs. Every year I try to dig out thatch I help drainage. This year I bought a dethatcher but practically kill myself trying to use it! It's also severe drainage between the houses facing Commonwealth & the houses facing Robinwood. There's is a manhole across Commonwealth a 3820 with no culvert and there is a culvert on Robinwood but apparently none that relieves the problems. The sidewalks along Robinwood are constantly wet and the runoff from yards look like there's iron in it I can and will take photos to send. It happens everytime it rains an appreciable amount. | e o -92.50092341 vf | 34.62993024 | N/A West Pointe | Crooked Creek | c 0 | 0 | 0 | 0 (| 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 | 0.0 |

| Part | 204 Lorraine F | Pope Lpope0222@gmail.com | Yard | EveryMulti | 501-837-8522 | 1313 Ruth Belle Court Bryant | Phone | No | Yes | -92.50440157 34.60943339 8 | Miller Place | Hurricane Creek | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
|--|-------------------|--|---------------|------------|----------------|---|-------|----|-----|---|------------------------------|--------------------|-----|-----|-----|---------|-----|---------|---------|
| Part | 205 Bart Wal | lker bartjwalker@yahoo.com | Yard | EveryMulti | 5013373998 | 2802 Barbara Ct Bryant AR | Phone | No | | There is a large empty field that the water runs off as well. It come in and gets out of the banks floods my yard and between two houses it has been more than a knee deep. Plus the neighbor or the opposite side drains across my back yard as well. A church owns the property behind us and they would let the city do something to help us. We should not be forced to leave like this very time it rains. Please help do something so it is not a concet every time it rains. We should have to worry about damage to our property. I have see it very high. There are some things that the city could do to help with this concern and then put it on the mast improvement plan. I have some photos that I could share but they | East Ridge | Crooked Creek (| 0 | 0 0 | 0.0 |).0 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| No. Section | 206 Robyn Da | avis Jrobyndavis@gmail.com | Yard | EveryMulti | 501-749-7142 | 905 Woodside Cove | Email | No | Yes | Woodside Cove. It begins between 904 Woodside Cove and 1004 Woodside Cove then flows across to a drain located between 905 Woodside Cove and 903 Woodside Cove. Also, in the most easurem part of the backyard of 905 Woodside Cove, there is always a lot of standing water after a heavy rain. Heavy rain will cause water to build up in my front yard which sometimes goes in my garage, 1 don't know how deep the water gets in my garage, b | Edgewood | Crooked Creek (| 0 | 0 0 | 0.0 | 1.0 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| ## Advantage Control of Control o | 207 JESSIC | CA Jessica.scott61310@gmail.com | Yard | EveryMulti | 501-909-4814 | 1412 Katrina Drive | Email | No | | across from the Jr high. Everytime it rains the ditch overflows and -92.49487866 it's like a river running through the backyards of those houses. | Pleasant Pointe/Cedarwood | | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Part | 209 Yesenia S | Solis Yeseniasalazar731@gmail.com | Yard | EveryMulti | 5016127502 | | Phone | No | Yes | , , | Forest Cove | | 3 | 3 3 | 3.4 | 3.7 3.8 | 3.9 | 1.6 4.2 | 5.0 4.4 |
| Part Secondaria Part | 210 Erick Ma | urtin eamartin304@gmail.com | Yard | EveryMulti | 501-353-5420 | 1406 Katrina Dr. Bryant, AR, 72022 | Email | No | Yes | station flood whenever there is rain, due to when the sewer was installed in the easement behind the business and our homes, the ditch was dug up and was not properly created again, it's one huge-92.49584503 a4.58253888 N/A flat surface so the water that is supposed to be in the drain connects with out yard and creates a huge river in all of our backwards. | Pleasant Pointe/Cedarwood | | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| 20 20 20 20 20 20 20 20 | 211 Sherry Willia | amson sherrywilliamson.106@comcast.net | Yard | EveryMulti | (501) 831-3896 | | Email | No | Yes | added trees and a French drain. But it has not helped since flood -92.49676934 34.62829155 17 | West Pointe | | 0 | 0 0 | 0.0 | 1.0 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Part Content Part Part Content Part Part Content Part | 212 Jack Prito | chett jpritch2@sbcglobal.net | Yard | EveryMulti | 5012312338 | 208 N. Hazel St. | Email | No | | property becomes basically a lake. Same for many of my neighbors. Some of the culverts are completely clogged. Some -92.48654325 34.59655748 N/A | Original Town | Crooked Creek (| 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Part Manual Indian Part Manual Indian Part Manual Indian Manual | 213 CHRISTY M S | SIMONS irisofmyeye@yahoo.com | Yard | | 5019123518 | | Phone | No | | neighbor to the South's back yard, but it is not sufficient to -92.4719413 34.61437896 22 | Cambridge Place | Crooked Creek | 1 | 0 0 | 2.0 |).5 2.2 | 0.6 | 0.0 | 0.0 0.0 |
| Part | 214 Howard Tu | ucker tuckertsr@yahoo.com | Road | EveryMulti | 501-940-4365 | 2412 Raintree Dr., Bryant, AR 72022 | Phone | No | Yes | Water constantly stands at the end of our driveway and does not ever drain. We have a pool of water with leaves and debris constantly. We have trouble checking our mail because of the water always in front of our mailbox. During winter months, snow and ice become a hazard when freezing. We have contacted the | Carywood/Raintree Acres | Crooked Creek (| 0 | 0 0 | 0.0 |).0 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Part | 215 Robert Si | haw reneeshaw@earthlink.net | Yard | EveryMulti | 5019200876 | | Email | No | | get to 10 to 15 ft wide then flows into courtyard cottages and flood them. We have been here for over 30 years and the years of | Stoneybrook/Springhill Acres | Crooked Creek (| 0 | 0 0 | 0.0 | J.O 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Procedure Proc | 216 Bob McKe | eon salinecoww@sbcglobal.net | Road | EveryMulti | 15019444528 | 15250 Hwy111, P.O. Box 390 | Email | No | | FLOODS out Brookwood Road and our Sewer plant. The BIG diltch that flows across Shobe Road from Bryant's Housing -92.4663666 34.61348737 N/A Developments under the Railroad Tracks backs up Crooked | WWTP - Outside City Limits | Crooked Creek (| 1 | 2 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Petsy much every time the org is a Flash Flood surring issued. Oil road levels thigher than organic jets so water from the load floors described in higher than organic jets so water from the load floors described in higher than organic jets so water from the local floors water and pulsars from the buildings was a surring jets so much water in their sweeting season, this water damages before the first season was a surring season. On the buildings was a surring season. On the buildings was a surring season. On the buildings was a surring season. On the floor in the season of the buildings was a surring season. On the floor in the season of the surring season. On the floor in the season of the se | 217 Lloyd Kas | ssker lloyd.kassler@dillards.com | Yard | EveryMulti | 501-580-2217 | 804 Shobe Rd, Bryant, AR 72022 | Phone | No | | The ditch between my home and 808 Shobe Rd was repaired/filled with a concrete pipe approx early 2000s to keep my house from falling into the open ditch at that time. During the last big stom a few years ago that caused all of the flood issues, it washed out where the pipe opens to a ditch and has left a huge hole/open pit. When there is a big rain, the water washes over the ground, as we as through the pipe. It has washed away all of the topsoil through this area over time. The road also floods briefly during the runoff. There appears to be a sewer pipe across the ditch in this area, and | Carywood/Raintree Acres | Crooked Creek 2 | . 2 | 2 2 | 3.6 | 1.7 3.8 | 2.0 | J.5 2.6 | 4.8 2.8 |
| 219 Debbie Fannon Fannondebb@yahoo.com Yard EveryMulti 501-366-3111 Branch and thousands of 29.51006966 34.62763746 6 Forest Cove Creek 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 218 Andrea C | clark andrea@andreasschoolofdance.net | HouseBusiness | EveryMulti | 5012311383 | 211 NE 2nd St Bryant, AR 72022 | Email | No | | Pretty much every time there is a Flash Flood warning issued. Our road level is higher than our gravel parking lot so water from the road flows directly around our building. We also have water comir from the roof with nowhere to go. We've had to install new gutter systems on the building as well as a sump pump to pump water further down the lot. We've also just had \$1,000 worth of termite damage to fix, in part because there is just so much water in their swarming season. When we flood it has risen to a max of an inch or so. Sometimes making it throughout the whole slab portion of the building to the crawl space. We have spent countless hours and even had to close our business for the day to shop vac all the water up. And our clients have to walk through standing water to | Original Town | Crooked Creek (| 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 20 Nan Ring Nanettering@gmail.com Yard EveryMulti 5018403987 1415 Katrina Dr. Bryant Phone No Yes The back yard floods within 1/4" of getting in our shed. It takes WEEKS to dry out to be usable and then muck boots are required. 21 John williams jp4williams@gmail.com Yard EveryMulti 501482836 1300 Katrina dr Email No Phone No Yes The back yard floods within 1/4" of getting in our shed. It takes WEEKS to dry out to be usable and then muck boots are required. 22 John williams jp4williams@gmail.com Yard EveryMulti 501482836 1300 Katrina dr Email No Phone No Yes The back yard floods within 1/4" of getting in our shed. It takes WEEKS to dry out to be usable and then muck boots are required. 32 John williams Jp4williams@gmail.com Yard EveryMulti 501482836 1300 Katrina dr Email No Phone No Yes The back yard floods within 1/4" of getting in our shed. It takes WEEKS to dry out to be usable and then muck boots are required. 42 John williams Jp4williams@gmail.com Yard EveryMulti 501482836 1300 Katrina dr Email No Phone No Yes The back yard floods within 1/4" of getting in our shed. It takes WEEKS to dry out to be usable and then muck boots are required. 42 John williams Jp4williams@gmail.com Yard EveryMulti 501482836 1300 Katrina dr Email No Phone No Yes The back yard floods within 1/4" of getting in our shed. It takes WEEKS to dry out to be usable and then muck boots are required. 42 John williams Jp4williams@gmail.com Yard EveryMulti 501482836 1300 Katrina dr EveryMulti | 219 Debbie Fa | nnon Fannondebb@yahoo.com | Yard | EveryMulti | 501-366-3111 | | Phone | No | | the street. All storm water drains into my hard. Paid thousands of -92.51006966 34.62763746 6 | Forest Cove | | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| Most of the houses on the east side of Katrina get flooded back yards when it rains a lot first that the property behind the privacy fence for this first material and the property behind the privacy fence for this first material and the property behind the privacy fence for this first material and the property behind the privacy fence for this first material and the property behind the privacy fence for this first material and the property behind the privacy fence for this first material and the property behind the privacy fence for this first material and the property behind the property behind the property behind the privacy fence for the property behind the privacy fence for the property behind the privacy fence for the property behind the property behind the privacy fence for the property behind the property behind the privacy fence for the property behind the property behind the property behind the privacy fence for the property behind the property behind the privacy fence for the property behind the property behi | 220 Nan Rir | ng Nanettering@gmail.com | Yard | EveryMulti | 5018403987 | 1415 Katrina Dr, Bryant | Phone | No | Yes | The back yard floods within 1/4' of getting in our shed. It takes | Pleasant Pointe/Cedarwood | | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| there is a big rain. Thank you | 221 John willia | iams jp4williams@gmail.com | Yard | EveryMulti | 5014828836 | 1300 Katrina dr | Email | No | | yards when it rains a lot from the run off of the property behind the privacy fences. I think that land belongs to the school. If a small ditch was cut 15 foot from the property line all that water would drain south to the detention area behind dollar general and big red instead of washing through the yards. It gets pretty bad when there is a big rain. Thank you | Pleasant Pointe/Cedarwood | | 0 | 0 0 | 0.0 |).0 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| 222 Zetha Bone z.bone@yahoo.com Road EveryMulti 5015190810 3405 Stillman Loop Email No Yes The street in front of my house retains water after rains- near the corner of Stillman and Vickie Dr | 222 Zetha Bo | one z.bone@yahoo.com | Road | EveryMulti | 5015190810 | Bryant | Email | No | Yes | The street in front of my house retains water after rains- near the corner of Stillman and Vickie Dr -92.51484064 34.62506654 5 | Springhill Manor | Creek | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| 223 jeffrey neel neelworld2001@yahoo.com Yard EveryMulti 501-416-5172 1403 Katrina dr Bryant, AR 72022 Email No Yes Back yard standing water over 1 foot -92.496 34.5823 N/A Pleasant Pointe/Cedarwood Pleasant Pointe/Cedarwood Creek 0 0 1 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 | 223 jeffrey no | eel neelworld2001@yahoo.com | Yard | EveryMulti | 501-416-5172 | | Email | No | Yes | | Pleasant Pointe/Cedarwood | | 0 | 1 1 | 0.0 | .0 0.0 | 0.0 | 1.0 0.5 | 1.1 0.6 |
| Behind my home is a farth aceds attention, they need some type of a large per law tater to crain into and lake the water to the retaining pond behind all houses on to drain into and lake the water to the retaining pond behind all houses supposed to address it years ago. Withen we have lots of rain into and lake the water to the retaining pond behind all houses on to drain our years ago. With me have lots of rain into and lake the water to the retaining pond behind all houses on this row ago. With me have lots of rain our and lake the water to the retaining pond behind all houses on this row ago. With me have lots of rain our and lattle way to the unit of the retaining pond behind all houses on this row and lattle way to the unit of the retaining pond behind all houses on this row all though the time in the yards. The yard will stay wet almost all year unless it hasn't rained in a while. See below The policy of the ground all the way to the independent of the policy of the ground all the way to the policy of the ground all the way | 224 Shannon S | Sims Smsims76@yahoo.com | Yard | EveryMulti | 5015173371 | Arkansas It floods behind all houses on this row behind fence into the yards. The yard stays wet almost all year unless it | Email | No | | type of a large pipe for the water to drain into and take the water to the retaining pond behind the mailboxes. The water does not drain correctly and Landers builder was supposed to address it years ago. When we have lots of rain you can see water stifting on top of the ground all the way to the tree in the yard behind me. My yard will stay wet almost halfway up my backyard causing a huge muddy mess for my dog. Please look into putting drainage pipes all the way behind the subdivision this has been a major complaint for everyone in this subdivision for as long as I have been here. I have taken photos in the past I will have to find them on a hard driver if you actually need them there know I will look for them. | Johnswood Village | Crooked Creek (| 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| 225 Malt cochran Jm_cochran@yahoo.com Yard EveryMulti 5019401371 2620 johnswood village drive Email No Yes The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it rains and so do the street The houses in back of subdivision yards flood when it | 225 Matt coch | hran Jm_cochran@yahoo.com | Yard | EveryMulti | 5019401371 | 2620 johnswood village drive | Email | No | | GO UTO CATOOL | Johnswood Village | Crooked Creek (| 0 | 0 0 | 0.0 | 1.0 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| 226 Roger Poole rogerover3dot@gmail.com HouseBusiness EveryMulti 5018375116 Bryant, AR 72022 Email No Proceeding that Character and Supposed From the drown stream stanced supposed From the drown stream strea | 226 Roger Po | oole rogerover3dot@gmail.com | HouseBusiness | EveryMulti | 5018375116 | | Email | No | | recently but the down stream ditch that it feeds into is choked with thick vegetation including what some would call small trees. It 92.50796873 34.62116988 6 | Forest Cove | | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 |
| 227 Rosie Norman Rosienorman@hotmail.com HouseBusiness EveryMulti 661-221-3978 3201 Independence Circle Bryant AR. 72022 Phone No No Every time it rains a corner of our backyard floods -92.48588949 34.62704709 6 West Pointe Hurricane Creek 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 227 Rosie Nor | rman Rosienorman@hotmail.com | HouseBusiness | EveryMulti | 661-221-3978 | | Phone | No | No | | West Pointe | | 0 | 0 0 | 0.0 | 1.0 0.0 | 0.0 | 0.0 | 0.0 0.0 |

| | | | | | | | | | | | This entire neighborhood is suffering from extreme standing water and saturated lots after rain. I know that my house has standing water that pools against my foundation and is slowly eroding the land. I have talked to many of the residents on my street and also with the famility who owns the large plot of land behind us and they | | | | | | | | | | | |
|----|--------|-------------------|------------------------------|---------------|------------|--------------|---|-------|-----|-----|---|----------------|---------------------------------|--------------------|-----|---|---|-----|---------|-----|--------|-----------|
| 22 | 28 B | irooks Channell | Brooks.channell@yahoo.com | Yard | EveryMulti | 5012135191 | 3413 LaCross Drive Bryant, AR 72022 | Phone | No | No | all agree that the city needs to do something about the water issue or this neighborhood is going to go downhill structurally fast. There 92.464219 needs to be a drainage system that runs down from Raymar road, all the way down to the back of the neighborhood running behalf own to the back of the neighborhood running behalf or fance line to drain this water and it should be put as a high priority project. I urge someone involved with his project to visit my house after a rain and see the amount of water that these areas hold. Please contact me for more information. Email me with an email address I can send pictures to. I will start getting them. | 66 34.62490475 | 19 Meadowlake | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 22 | 29 | Donna Rice | donna.rice1937@sbcglobal.net | Other | EveryMulti | 501-580-3957 | 518 Lora Dr Bryant, AR | Phone | No | Yes | Almost all of the culver's ohn my side of the street, even number houses, are blocked and the ditch isn't deep enough for the rain run off, with power poles, fonce is learning), and water meters in the ditch it can't be dug deeper, this causes yards, carports, my garagand the street in front of the old Fire Station to flood. Answerd "Order" in below question didn't give all the above option. I haven't made an insurance claim, paid out of pocket for repairs do not know if neighbors have filed claims. Have sent pictures to Street Department. | 9 34.62074005 | N/A Pikewood | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 23 | 30 . | Jeffrey Hartsell | jhar12399@gmail.com | Yard | EveryMulti | 5014252137 | 3820 Robinwood Circle Bryant, AR 72022 | Phone | No | Yes | The end of the storm drains in our neighborhood terminate in our backyard. The storm drain has began to erode the ground in my backyard. The periods of heavy rain my entire backyard floods out to 30-40 feet. Also in periods of heavy rain, the storm drain system does not carry the entire load and overflows through my driveway -92.497891 and my fence gate between mine and my neighbors house. This has caused several thousand dollars worth of damage from a storm on April 30, 2017. I am attending a video from a storm on May 18, 2021. | 34.62974188 | 17 West Pointe | Crooked Creek | 1 1 | 2 | 2 | 2.4 | 1.3 2.6 | 1.5 | 3.4 1. | 8 3.6 1.9 |
| 23 | 31 1 | Kenneth Bunn | kbunn1950@yahoo.com | Yard | Every | 15019437098 | 1813 Pine Circle | Email | No | Yes | Watershed (I think) located at I30 Frontage and N. Prickett Rooverflows and is constantly flooding back yards that back to the watershed. | 34.61620312 | 7 Hidden Creek | Hurricane Creek | 2 3 | 3 | 3 | 1.1 | 2.3 1.1 | 3.1 | 0.8 4. | 3 0.8 4.6 |
| 23 | 32 Ka | atherine Roberts | Krob467@yahoo.com | Yard | EveryMulti | 5014137791 | 2301 Chelsea dr Bryant, AR 72022 | Phone | Yes | Yes | During a regular rain water accumulates in back and front yard causing mosquito problem and yard stays wet and soft almost all -92.487278 year long. Water has come into the house on several occasions: | 34.6153653 | 37 Carywood/Raintree Acres area | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 23 | 33 | Erick Martin | eamartin304@gmail.com | Yard | EveryMulti | 5013535420 | 1406 Katrina Dr. Bryant, AR, 72022 | Email | No | Yes | When the sewer was installed for the new dollar general an Valero, the ditch in the easement was never fixed so there is a ton of standing water that it's black and creating a mosquito breeding | 9 34.58266941 | N/A Pleasant Pointe/Cedarwood | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 23 | 34 E | Brenda Gregory | Jbgreg@aol.com | Yard | | 501 847 1513 | 1312 Ruth Belle Ct Bryant,AR 72022 | Email | No | Yes | ground. Backyard has a huge hole due to run-off from streets behind me also yard fills with water and dead grass from streets behind me | 34.59421926 | N/A Miller Place | Hurricane Creek | 1 1 | 1 | 1 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 23 | 35 | Traci Baker | Supermom2two14@yahoo.com | Yard | EveryMulti | 5015807441 | 1001 Edgewood Dr Bryant, AR 72022 | Email | No | Yes | | 7 34.61346914 | | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 23 | 36 R | onnie E Kettles | r.kettles@yahoo.com | Yard | EveryMulti | 501-680-4288 | 2754 Mountain View Road Benton, AR 72019 | Email | No | | Drainage ditch between house and street overflows every time it rains. Ditch has standing water most of the time | 8 34.61577178 | 37 Carywood/Raintree Acres area | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 23 | 37 J: | ay Sweningson | Speedwagonj@yahoo.com | HouseBusiness | Every | 5016285111 | 300 Crossing Court Bryant, AR 72022 | Email | Yes | Yes | It is a well known issue. The creek in The Crossings at Oak Hill (within the Oak Glenn subdivision area) has flooded 2-3 homes in out neighborhood since the community was built. The creek needs to be cleaned out and restructured. The first big storm we had, a adjoining property had cut trees, but didn't remove them, they washed into one of our bridges and dammed it up. Resulting in massive erosion and washing away of protective rocks and such Since then we have had beavers dam further down creek on another person's property as well. And growth needs to be removed as well so flow can be smooth. | 34.64461806 | 30 Oak Glenn | Owen Creek | 3 3 | 3 | 3 | 4.0 | 4.6 4.6 | 5.1 | 5.4 5. | 9 5.6 6.2 |
| 23 | 38 | Carol Alkire | calkire2@sbcglobal.net | Road | Every10 | 501-847-3434 | 1014 Cedar Dr. (Springhill Acres) | Email | No | No | The creek can overflow onto the roadway during heavy rain events92.506305 | 2 34.62959256 | 6 Springhill Acres | Hurricane Creek | 2 2 | 3 | 3 | 3.2 | 2.4 3.5 | 2.7 | 4.1 3. | 2 4.4 3.4 |
| 23 | 39 DA | NIEL DELLORTO | dangaild@att.net | | | 501-352-8200 | 301 DOGWOOD PLACE DR | Email | | Yes | This is an erosion issue from the storm drain/ditch between 301 and 305 Dogwood Place Dr. We have live here for 20 years and the ditch has eroded several fect on oths videes. A sewage manho separated due to erosion in Oct. 2013 (see pictures) and was taken out. There is also a lift station at the back of the lots. Rocks and some concrete has been put down but the ditch sides are still solwing eroding. We were told when we moved in 20 years ago that the city plan was to put in a large culvert pipe from the street the lift station and cover it level with diff and grass. This erosion we eventually encroach the fences on both sides of the ditch. | 8 34.60581511 | 38 Dogwood Place | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0 0.0 0.0 |
| 24 | 40 C | asey McCarthy | caseymc2011@gmail.com | Yard | EveryMulti | 5015907880 | 2807 Johnawood Village Drive | Email | No | | The South side of our neighborhood floods horribly when it rains and remains wet for days afterwards. There is a shallow creek bed behind our fence that does nothing to help move the water. I've seen the water stand there for many days so it doesn't even get soaked up by the ground. My backyard is mostly unusable for many months during the year. | 8 34.61425491 | 22 Johnswood Village | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 24 | 41 M: | ary Beth Brewer | beth.brewer@sbcglobal.net | HouseBusiness | EveryMulti | 2143540657 | 17 Eastwood Dr | Email | Yes | | Development of new housing on off Mills Park Road increased runoff during mid to heavy rains, resulting in flooding on Eastwood Dr., specifically in front of 16 Eastwood. Bryant widened the drainage ditch between Mills Park Rol and Eastwood Dr., however they did not install drain all the way to the creek behind subdivision of the thing the second property of the street in 1924.79915 front of 16 Eastwood Dr. Because there is so much water composition to the ditch now that the underground drain cannot handle the volume and overflows into the street and into the house at 16 Eastwood. This house has flooded several times over the past few years due to this issue. | 8 34.6091181 | 23 Eastwood | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 24 | 42 Wil | lliam Brent Jones | wbjones1@gmail.com | Yard | EveryMulti | 5014254290 | 212 Dogwood Place Dr | Email | No | Yes | I've lived at this address since 2006 and the backyard on my sid of the street all the way down to the bottom of the hill is a lake when we have heavy rain. It pools up at each privacy fence. I am -92.488416 attaching a photo from April 13 and still have some standing water | 34.60541426 | 38 Dogwood Place | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 24 | 43 Co | ourtney Johnson | Crjohnson@uams.edu | Yard | EveryMulti | 501-909-3225 | 305 Dogwood Place Dr | Phone | No | Yes | today the 24th. Ever time there is heavy rainfall or extended days of rainfall the ci owned ditch floods our yard | 34.60582431 | 38 Dogwood Place | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 24 | 14 | Steven Wise | steven.wise@irsd.org | Other | EveryMulti | 5013501410 | 104 RICH ST | Email | No | No | Storm water in this part of Bryant drains to the railroad tracks and that is where it stays. These areas near the railroad do not drain and produce millions of mosquitoes during the summer months. The railroad property is not maintained at all by anyone. The last time the area was cleared and dredged was over 40 years and property. The railroad has been uncooperative in keeping the area maintained. Previous mayors have also been unable to address the issues blaming the railroad instead. Surely the city and our attorney can get the railroad to comply with this maintenance issue. | 9 34.59499205 | 11 Railroad | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0 0.0 0.0 |
| 24 | 45 | Olga Williams | olga@markpettersen.com | Yard | EveryMulti | 501-847-4857 | 718 Elkhart Loop Bryant, AR 72022-3956 | Email | No | Yes | Small river flows through this section of the Bryant Meadows neighborhood during heavy rains, most recently was 2022-04-13 -92.496859 Flooding of one or more homes over the years has occurred here. | 34.58535288 | N/A Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 0.0 |
| 24 | 46 | Rosalyn Poole | rosalyn0430@gmail.com | Yard | EveryMulti | 501-428-8778 | 19 Arcadia Circle Bryant AR 72022 | Email | No | Yes | Along our property line in the backyard there is standing water year round. It is worse when it rains. It keeps the neighboring yard wet and boggy. | 34.60042383 | 35 Bloomfield Hills | Crooked Creek | 1 1 | 1 | 2 | 0.8 | 0.9 0.8 | 1.0 | 0.8 1. | 5 0.8 1.7 |
| | | | | | | | | | | | A tree with rotten roots reil into our backyard destroying the rence in 2019 When it is warm, the mosquitoes are awfu I live in Bryant Meadows. Every time it rains our street (Martin) | | | | | | | | | | | |
| 24 | 47 C | Charisma Keith | charismakeith@icloud.com | Yard | EveryMulti | 5012135112 | 505 Martin Ln Bryant, AR 72022 | Email | No | | floods where there is a drained either. My backyard and front yard flood every time it rains to the point that you cannot walk on it fol days after the rain and is almost always softly when when it doesn't rain. In the street the water can be several inches deep, My water rate under water work of the time. I have contacted the city and they will not fix the issue. I know my yard is not the only one flooding! I see neighbors that have standing water in their front yards every time it rains. I can only imagine the back is the same. | 8 34.59033279 | N/A Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 | 0.0 0.0 |

| 248 | Cou | urtney Johnson | courtney3980@gmail.com | Yard | EveryMulti | 5019093225 | 305 Dogwood Place Dr. | Phone | No | Yes | The run-off is full of weeds, some growing as tall as our house, think this is a safety concern because it very well could be bedding .92.48725764 snakes. This run-off is causing land erosion to my propert. | Dogwood Place | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 |).0 |
|-----|--------|-------------------|---------------------------|---------------|------------|---|--|-------|-----|-----|--|---------------------------|--------------------|-----|---|---|---------|-----|---------|-------|-------|-----|
| 249 | G | Gunner Miller | gunnermiller9@gmail.com | Yard | EveryMulti | 4798835836 | 3309 Longmeadow Drive Bryant, AR, 72022 | Email | No | Yes | I have nearly continual standing water in my yard except for in th hottest of summer months. The sub division was barely built up when it was constructed and is at a lower elevation then the road leading in. Anytime it rains, all runoff flows from the top of the road through all of the streets and yards in the neighborhood. Everyone | Meadowlake | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 |).0 |
| 250 | В | Branon Fryar | fryarfamily@yahoo.com | HouseBusiness | EveryMulti | 5016900368 | 4 Huntington Estates Bryant AR 72022 | Phone | Yes | Yes | Drainage issue I would like to submit is for Crooked Creek flash flooding. I live at 4 Huntington Estates and the creek flash flood the very rapidly and becomes dangerous multiple times a year. Water can be seen several feet high into Parkview cul de sac as well into my property bodering both sides of Crooked creek. Plans for Bryant Parkway and a walking trail are to cross crooked creek in the area I am reporting. This is a major public safety issue with all the planned development. I know houses on Eastwood flood during major rain events due to tributary drainage issues into crooked creek. | Eastwood | Crooked Creek | 3 3 | 3 | 3 | 3.3 4.5 | 3.5 | 4.9 3.9 | 6.0 | 4.1 (| ì.5 |
| 251 | К | Kelly McLarty | kellymclarty@ymail.com | Yard | EveryMulti | 501-425-7081 | 1609 Davis Dr. Bryant, AR 72022 | Email | No | No | The drainage creek behind my house continues to plug up. This is the drainage section from Andrew Dr. to Forest Dr. The backyard -92.50777561 34.62299747 6 3117 Forest Dr. gets flooded during hard rains. | Forest Cove | Hurricane Creek | 1 1 | 1 | 1 | 2.6 0.8 | 2.8 | 0.9 3.2 | . 1.1 | 3.4 | 1.2 |
| 252 | : Sa | Sandra Powell | sandi_1212@sbcglobal.net | Yard | EveryMulti | 5015531011 | 3349 Garden Club Drive Bryant, AR 72023 | Phone | No | Yes | When raining a flow of water travels down my back yard with about -92.47718435 34.62585073 N/A | Andres Place | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 253 | ca | arolann boone | kjboone1@gmail.com | Road | EveryMulti | 5016802335 | 24 tanglewood | Email | No | | with the extended building of the school there is an ever increasing amount of water run off when there is a heavy rainfall. There is now standing water on the road in front of 24 tanglewood- it is suspected that future development (denouement of vegetation, the addition of concrete and leveling of ground) will exacerbate the problem. thanks kathy boone | Tanglewood Acres | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 (|).0 |
| 254 | . Jı | Jessica Ross | | Yard | EveryMulti | 4799700174 | 3009 Andrew Dr. Bryant, AR 72022 | Email | No | | The back yards in my neighborhood (Forest Cove) flood horribly . river literally runs through the middle of my yard and just stays wet. Same with the side yard of my house. Having bought my house at92.50935779 the end of winter, the flooding issue wasn't evident until spring. It's92.50935779 so frustrating when it comes to mowing and just valking around in my yard not to mention the mosquito problem it creates. | Forest Cove | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0 |).0 |
| 255 | Jo | Joanne Griggs | jwgriggs56@gmail.com | Yard | EveryMulti | 5015293009 or 501 672-9714 (Terry Griggs) | 814 - 811 Lindy Cove | Email | No | | The cul de sac has no storm drain. It ponds up on east side (se addresses above). The water runs through the back yard like a -92.49299128 34.58706069 N/A | Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0 |).0 |
| 256 | Willi | liam Pennington | Cliffandjessp@yahoo.com | Yard | EveryMulti | 8708185719 | 2312 Richland Prak Dr | Email | No | Yes | Il ie on the west side of Richland Park and several home including mine have spots in our back yards that retain water. The do not drain properly at all. It stays so wet that you can't cut the egg. 4902894 34.61792588 37 grass not even get close with a weedeater without is king into the | Carywood/Raintree Acres | Crooked Creek | 0 0 | 1 | 1 | 0.0 0.0 | 0.0 | 0.0 1.8 | 0.6 | 2.0 |).7 |
| 257 | Kris | istan Hendricks | krhendricks4546@gmail.com | Yard | EveryMulti | 5015078318 | 13 Parkview Dr Bryant,AR 72022 | Email | Yes | Yes | ground 2017-in garage about 1.5 ft of water Yard has flooding multiple times every yes -92.47901492 34.60878378 23 | Eastwood | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0. | 0.0 | 0.0 | 0.0 |
| 258 | | Doris Sloan | dorisloanj@gmail.com | | | 5015168152 | 300 Dogwood Place Drive, Bryant. | Email | No | | At this address more than 20 years and have had on-going issue with sinkholes at the drain at the SE corner of our back yard92.48780657 34.60534511 38 | Dogwood Place | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 | ٥.0 |
| | | | | | | | | | | | There is one forming now, about 3" x 3" across Water comes from north of the interstate, under I-30 and the access roads and is flooding the back of World Wide Weapons | | | | | | | | | | | |
| 259 | Ma | Marshall Peters | marshall@mpire.biz | Other | EveryMulti | 5014148340 | Marshall Peters & Associates 2020 W 3rd St, Suite 201 Little Rock, AR 72205-4463 | Email | No | Yes | and the parking lot of Bryant Plaza. With each moderately heavy rain, this is causing exponentially more erosion of the land on both of sides of the disch. In the fifteen years of my association with these properties, water has never once stopped flowing! | Interstate service road | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0 | 1.0 |
| 260 | Tim ar | and Lesa Vandiver | tivandiver1983@gmail.com | | | 501.554.1511 | 3816 Logan Ridge Dr. Bryant AR 702222 | Email | | | No damage. I just understood from the card in the mail that this was where poor drainage issues could be discussed to improve drainage. There is a retention pond at the end of the street (Logan Ridge Dr.) next to Hwy 5. We were told that this was a retention pond to hold water to slow drainage before emptying into the ditch alongside Hwy 5. It is nothing but a frog and snake reservoir. During the new construction of Hwy 5 could this pond be eliminated? Simply connecting the intake from the street drainage to the exit spillway with a large pipe and then filling in the pond and covering the pipe with dirt would solve the problem. Then the homeowners could just move that area instead of dealing with the hazard. Come look at It. 1. Shakes. Tim | Hunter Crossing | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 |).0 |
| 261 | Je | eannie Telford | Telfordjeannie@gmail.com | Road | EveryMulti | 501-773-9178 | 812 Providence Drive Bryant 72022 | Phone | No | Yes | -92.50393612 34.62767942 6 | West Pointe | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 |).0 |
| 262 | . Ja | ason Baertlein | Jasonbaer79@gmail.com | Yard | EveryMulti | 414-379-0655 | 1300 Johnswood rd Bryant AR 72022 | Phone | No | | Would be great to have better drainage on mills park rd and shob rd, being how much tax revenue will be coming from the new development of Bryant Parkway and the future expansion it would -92.48080995 ad.61326006 N/A be great to get a jump start to keep this area expanding and generating more revenue for the cit. Whenever it rains a few inches the dicthes in front of my houst | Mills Park/Shobe Road | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0 | 1.0 |
| 263 | Pi | Peggy Wilson | pegofmyheart99@gmail.com | Yard | EveryMulti | 501-231-2206 | 210 SE Second Street Bryant AR 72022 | Email | No | | wherever it rains a lew inches the dicties in roth or in yolose, and across the street from my house stay full of water for weeks. When it rains a lot the ditch across the road from my house will flood and cover the road and flood my front yard. The flood water -92.4871563 does not reach the house, but has come close a couple of times. The city has dug out the ditches, but that has not seemed to help the problem. | Original Town | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 (|).0 |
| 264 | | Gail Cliff | gmcliff52@aol.com | Yard | EveryMulti | 15015800061 | 802 Boone Road Bryant | Phone | No | No | Ditch stays full of water since the City dug around in it several years ago. the water level is below the culvert to drain. The city w. not keep it mowed and it is too boggy for us to mow. This had been going on and complaints have been made since Dabbs was mayor. We have lived here 46 years and have always been able to keep it clean. Please again it needs to be looked at. | Boone Road | Hurricane Creek | 0 0 | 0 | 1 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 1.4 (|).5 |
| 265 | As | Ashley Copple | Ancopple@gmail.com | Yard | EveryMulti | 5012099795 | 1804 Briarwood Cove Bryant, AR 72022 | Email | No | Yes | Back and front yard floods up to 3-4 inches when it rains. Never in garage or home. The backyard sees more flooding and it seems flow like a very small creek from 1802 to 1806 which has caused damage to my wooden privacy fence. | Edgewood | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 (| 1.0 |
| 266 | ; Jo | Johnny Bragg | Jbragg4@aol.com | Road | EveryMulti | 501-690-0175 | 1 Parkview Dr Bryant, AR. 72022 | Email | No | | Parkview Dr connects with Mills Park Rd. The southeast corner at this connection holds water. The original street was concrete and it had a "fariange channel" there to allow all the water coming down the hill on Mills Park Rd to continue down to the creek. Several years ago the city paved Parkview Dr with asphalt and covered the draining channel. Then last year Mills Park Rd was redone with a new layer of asphalt and it is even worse. There is no way for all the water to drain. A depressed area if you will, or area lower that -92.48090667 the asphalt road exists and remains filled with water long after rain has gone, days. Even in winter it remains a thin sheet of ice there. Over the years I have talked to so many different people with the city about it, even shown some of them in person. All said they would get that remedied, that it was bad. To this date nothing don The area catches leaves, trash, twigs, cans, and they stay there until I go clean it up. The city never even does that. | Eastwood | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | . 0.0 | 0.0 |).0 |
| 267 | · D: | David Skinner | sharking41@hotmail.com | Yard | EveryMulti | 15018471031 | 2410 Cherry Creek Circle | Email | No | Yes | Cherry Creek Circle sub-division has major drainage issues that's been overfooked ever since it was developed. Water backups in the road, in individual lots, and is a health issue with all the mosquitos it brings to the neighborhood. I live in the comer lot ne to Shobe and Bryant Parkway. Rainwater from every backyard, east of my lot, flows around all sides of my house and has made my yard a total swamp. The rainwater from all the other backyards can't drain to the ditch along Shobe road because of the long brick and the same of the same should be an investigation of the same should be same should be an investigation of the same should be same shoul | Cherry Creek neighborhood | Crooked Creek | 0 0 | 0 | 0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 |).0 |

| 268 | Larry Edwards | ldonedwards@gmail.com | Yard | | 918-853-2266 | 2405 Cherry Creek Circle | Mail | No | Yes | Rainwater backs up into the south side of my yard creating a swampy area and causes a mosquito problem. The water runs from neighboring backyrater and from the road. The area is so -92.47581425 34.81228223 N/A swampy it can not be mowed during the spring and early summer. This is a problem at least 4 months out of the year. | Cherry Creek neighborhood | Crooked Cree | k 0 (| 0 | 0 | 0.0 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
|-----|-------------------------------|---|--------------|------------------------|----------------------------|---|----------------|----------|------------|--|---|--|-------|---|---|---------|---------|-------|--------|-----|
| 269 | James Fowler | jamesrfowler@hotmail.com | Road | EveryMulti | 5019090997 | 3413 Village Green Drive Bryant, AR 72022 | Email | No | Yes | The storm drain on Village Green Dr, that is meant to drain int Meadowlake pond, sits below water line at times and is filled with sand and gravel that has been transported by stormwater. The street & neighboring yards flood ever time it rains. There is a sinkhole forming in street and shoreline erosion continues to worsen. I've already repaired one dangerous hole near the pond after witnessing three different children and two dogs fall in on separate occasions. | Meadowlake | | | | | | 0.5 1.5 | | | |
| 270 | Bill james | Bill.d.james@gmail.com Budlers@att.net | Yard | EveryMulti EveryMulti | 5012090286 5015170486 | 2115 Hickory Drive 3309 Henson Pl. | Email Email | No No | Yes | Flooding in back yard and side do to water drainage issue92.51285815 34.63855011 N/A A contractor re-poured the curbs in front of my house. These curb are higher than the ones that were replaced. I was talking to the contractor and he lold me that the necessary dirt work would be done to bring my yard back up to curb level and re-sod the fresh dirt. Also, on the south side of my house, I get all of the back neighbors water. There was a hole in the original curb to drain this water. I asked for a hole for drainage and he said he would try to something. This water backup, floods my water meter box and levels to something. This water backup, floods my water meter box and levels the sevent of the sevent water. I have been colding for the contractor to come back. This has been quite awhite and fin sure it has slipped his mind. During all these bleen looking for the contractor to come back. This has been quite awhite and fin sure it has slipped his mind. During all these Since the last time, my lights fictor. I have been unsuccessful get them out to look at it. | Hickory Hill Springhill Manor | Hurricane Creek Hurricane Creek | | | | | 0.0 0.0 | | | |
| 272 | Brent Coney | brentconey@gmail.com | Yard | EveryMulti | 5016905877 | 2616 Finley Loop Bryant, AR 72022 | Phone | No | Yes | Between my house and my neighbors house has pooling water that was originally supposed to drain behind our houses into the culvert, however now the water is flowing to the front of my house that is at the very "bottom" of the hill and the drain is more up the hill so the water never gets to drain. -92.50952199 34.65540387 2 When we get a really bad rain there will be 6 inches to a foot of ra standing still between mine and my neighbors house. If we could get water to drain out the back of the properly like it originally did. I think the issue would be resolved. | Springhill Village | Hurricane Creek | 0 (| 0 | 0 | 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 273 | Carolyn Geffken | c.geffken@sbcglobal.net | Road | Every | (501) 749-5234 | 3003 Chapman Ct | Email | No | Yes | During flash floods of 3-4 inches , the sewer drains in front of my house can not drain. It is at a base of hills. Water at top of Finley Loop near Chapman Ct also covers the road. Excess water circles my house, draining down my side into the back yard to exit to Roset It. on the way to the drainage into the creek. This occurred in Spring 2018, twice 2019, April 4, 2020, May 19, 2021. In 2019, stood in the back yard to have water up to my hips. I put in retaining walls, nativerain garden, French drains. The water marks can be seen on front malibloxes, along fence, and debris on driveways. I noticed Chapman Ct road pawement is cracking more ach year. If tills with grasses which It my to pull out. During these flooding events, the road becomes a bowl of water, goes up driveways frime and neighbor across street) but herever entered the house, but close to. Excess water escapes to my back yard. When it recodes, it does so quickly. Depth of water in back fence it has been between 1-2 feet. | Springhill Village | Hurricane Creek | 0 (| 0 | 0 | 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 274 | James Easterling | jameseasterling83@gmail.com | Road | EveryMulti | | 2306 Cherry Creek Cir | Email | No | Yes | There are no culverts so water goes everywhere instead of th drains. Also this causes the asphalt to constantly be destroyed and never gets fixed, can you please look into this, thank you, some of the yards look life a swam | Cherry Creek neighborhood | Crooked Cree | k 0 (| 0 | 0 | 0.0 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 276 | Mark Mathis Brigham Barefoot | Mwm1904@sbcglobal.net | Yard Yard | EveryMulti EveryMulti | 501-350-7227 5012912850 | 1409 Katrina Dr Bryant At, 72022 3204 Independence Circle Bryant, AR 72022 | Phone Email | No No | Yes Yes | The back yard floots every time it rains. Always standing water. It -92.49676942 34.58227556 N/A The back yard floots every time it rains. Always standing water. It -92.49676942 34.58227556 N/A Almost each and each standing all our fencions in backyard of 320 Independence Circle due to runoff from shopping center on Hwy and water runoff from Independence Circle between 3204 and 3210. Drainage fills detention pond behind 3204 Independence Circle92.5029691 34.62410638 6 During heavy rains, detention pond gets 3-5 feet deep. Culverts are not large enough and Detention pond does not dry out until | Pleasant Pointe/Cedarwood West Pointe | Hurricane Creek Hurricane Creek | | 1 | | | 0.0 0.0 | | | |
| | | | | | | | | | | June thru September and only is dry if there is approximately 7 straight days of sunshine. Detention pond stays saturated from October till Mav. April 13th 2022 rainfall caused the "drainage ditch" behind our | | | | | | | | | | |
| 278 | Jesse | Tahoehenson@yahoo.com | Yard | EveryMulti | Henson | 608 shobe road Bryant Arkansas 72022 | Email | No | Yes | house to flood and rage extremely fast. This 'ditch' is somewhere around 10ft deep and is dangerous, causing our home and yard by -92.48750692 be pulled towards this now creek. I have a video of before and afti the rainfall as comparison that I will be happy to provide. | Carywood/Raintree Acres - on Crook Creek | Crooked Cree | k 0 (| 0 | 0 | 0.0 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 279 | Dan Wright | wright_dan@sbcglobal.net | Yard | EveryMulti | (501) 249-7067 | 2313 chelsea dr Bryant Arkansas 72022 | Phone | No | Yes | I have had standing water in my backyard and on the south side of my house. Its been there is since the beginning of march. It sometimes covers about half my yard. It's a about 3 to 4 inches deep and runs along my back fence. Grass has never grown there-92.48790185 since i bought the home in 2013. My metal storage buildings are on blocks to keep the floors from rotting out. Mosquitoes are terrible! | Carywood/Raintree Acres | Crooked Cree | k 0 (| 0 | 0 | 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 280 | Jean Martin | smartin8234@yahoo.com | Yard | EveryMulti | 501 786-7669 | 608 SE 1st St | Email | No | Yes | I bought my house 6 years ago. My back yard floods every time it rains. It holds at least inch to two inches of water. My neighbor pa for contractor to look at issue. They said french drains with pump. They said drainage the city has implemented behind house that tit "-92.48360986 pipe is out of ground. I have emailed my alderman and he responded with neighborhood is not the list for help. The water has never entered my house but has been very close. | Hidden Forest | Crooked Cree | k 0 (| 0 | 0 | 0.0 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 281 | Darby Jackson | jacksondarby@yahoo.com | Yard | EveryMulti | 501-766-5516 | 2808 Carywood Drive Bryant, AR 72022 | Phone | No | | Our entire Carywood/Raintree Acres Neighborhood. We live very near the Lora/Carywood Drive intersection. There is one house on Lora that is uphill from us. The rainwater rolls off their property down a slope into our yard. Our garage has flooded at least 2x/ye since we moved here in Fall 2012. Usually once in the Spring and once in the Fall. Water of about 1-2 inches seeps in and stands in the garage for 24-48 hours. Our front and back yards both have low spots where the water drains and stands. The water runoff from our upper neighbor is enroling our yard on that side becoming a steep slope. More than ourselves, everyone downhill from us he major flooding issues which have led to foundation issues and thousands of dollars in repairs from flooding interiors. The current plan does not look to expand a culvert drain down the length of Carywood but should from top of hill at Lora down to bottom. A drainage ditch or culvert needs to be put in for the houses betwee Chelsea and Amber Cove | Carywood/Raintree Acres | Crooked Cree | k 0 (| 0 | 0 | 0.0 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |
| 282 | Angela Moore | angelamoore918@gmail.com | Yard | EveryMulti | 501-707-4591 | 1613 S Lea Cir Bryant, AR 72022 | Email | No | Yes | Every time it rains hard, our neighborhood floods. The water floods to our side yard and back yard and pushes debris all over our back years fence. 3 years ago with the floods in April, water came up within 3 inches of coming in our house. Also, our next door neighbors used to get lots of sewage in their yard from the cap coming off the sewer cover in the middle of Lea Circle. That problem was fixed with a new cap that is bolted on, but now the jobs two large rains in AprilMay I have tired to use my washing machine the day after the rain and it seems the drains are not large cloudly to handle the water. Twice when my washer was on the draining water cycle, water starts trying to come out of the pipes connected to my washer. We need a better/bigger pipe and drainage system. | Near Boone Road | Hurricane Creek | 2 2 | 3 | 3 | 0.8 2.1 | 0.9 2.7 | 0.9 4 | .2 1.3 | 4.8 |
| 283 | Mark Smith | stephaniesmith0725@gmail.com | Road | EveryMulti | 5013505220 | 1909 Pine Circle | Phone | No | Yes | We have had drainage issues for years right by our driveway \(\)! mall boxes it's so bad we can't even mow our grass in his area \(\) 4. call the water company to look at it but they still never do anything about it \(\) it has oil in it and has odor in | Hidden Creek | Hurricane Creek | 0 (| 0 | 0 | 0.0 | 0.0 0.0 | 0.0 0 | .0 0.0 | 0.0 |

| 284 | Amy Zom | Amsmall2002@yahoo.com | Other | EveryMulti | 501-519-2177 | 2403 Carywood Dr 72022 | Email | No | | My entire property is inundated with stormwater runoff from Richland Park (Thanks James Ballew & cronies) every time it rains. My home has flooded up to knee deep multiple times. Stormwater covers my entire property & flows through the entire width of my back yard to reach the ONLY dish between the "retention" pond (SW comer of Richland Park) & the only drain on Carywood. The "dish" is non-existent or filled in outside of my property leading to stagnant water. Water also jumps the front curb & flows up my driveway towards the house before flowing onto the neighbor's property. My ground is toxic. I'm afraid the runoff is making my dogs sick. To answer the next questionEVERYTHING FLOODS HERE! | Carywood/Raintree Acres area | Crooked Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
|-----|--|------------------------------|---------------|------------|----------------|--|-------|-----|-----|--|------------------------------|------------------------|-----|-----|-------|-----|-----|---------|-------|---------|
| 286 | Carlton Anderson | anderson.corky@currently.com | Yard | EveryMulti | (501) 840-1276 | | Email | No | Yes | The ditches that are on the back and the side of my property have not been dug out and needs leveling so the water can run through them. The new drain that was put in are higher then the ditches, with the new directing more water to the ditches. | Carywood/Raintree Acres | Crooked Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 287 | Butch Higginbotham | mtnfork@yahoo.com | Yard | EveryMulti | (501) 350-2088 | 400 NW 3rd St Bryant, AR 72022 | Email | No | | Yard and crawl space flooded after virtually every ra Excess runoff from school never addressed Study by Ted Taylor on original city area open ditches and culvert found numerous issues with filled ditches, covered and undersized culverts. NEVER addressed I've had to repair foundation twice last five years because of continued flooding Loan provide pictures upon reques Drainage issues at SE Taylor around electric substatio | Original Town | Hurricane Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 288 | Butch Higginbotham | mtnfork@yahoo.com | Yard | EveryMulti | (501) 350-2088 | 400 NW 3rd St Bryant, AR 72022 | Email | No | Yes | Stir water from area drains there with no storage or detention. Floods numerous back yards on SE 2nd st Ted Taylor and Tim Fournier have both been to area in past 3 vears. Nothino done to date to resolve issue | Original Town | Hurricane Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 289 | Jeremy Withers | Withersjeremy@yahoo.com | Yard | EveryMulti | 5016267547 | 5331 Buckingham PI Bryant, AR 72022 | Email | No | Yes | Poor drainage on Buckingham road in Kings Crossing. Several houses experience flooded yards during rain storms. In extreme cases the roads are flooded and impassable. 92.46786632 34.64231603 N/A | Kings Crossing | Owen Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 290 | Jeremy Withers | Withersjeremy@yahoo.com | Yard | EveryMulti | 5016267547 | 5331 Buckingham PI Bryant, AR 72022 406 NW 3rd | Email | No | Yes | Poor drainage on Buckingham road in Kings Crossing, Several houses experience flooded yards during rain storms. In extreme cases the roads are flooded and impassable. Flooding from overflowed ditches off INV 4th, storm water from experience and user flooded distance of the INV 4th storm water from experience and user/flowed distance of the INV 4th storm water from experience and user/flowed distance of the INV 4th storm water from experience and user/flowed distance of the INV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water flowed the ENV 4th storm water from experience and user flowed the ENV 4th storm water flowed the ENV 4th | Kings Crossing | Owen Creek | | 0 0 | | | | 0.0 0.0 | | |
| 291 | Butch Higginbotham | mtnfork@yahoo.com | Other | EveryMulti | (501) 350-2088 | Bryant, AR. 72022 | Email | No | Yes | SCHOOL BILD OVERHOWED DITTOL THE C | Original Town | Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 |
| 292 | Adria Tacker | atacker6006@gmail.com | Yard | EveryMulti | (501) 681-7771 | 2306 Amber Cove Bryant AR 72022 | Phone | Yes | Yes | 2/2018 Front and back yard and stree -92.48822072 34.61590635 37 | Carywood/Raintree Acres area | Crooked Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 |
| 293 | Kathryn F Whittamore | kwhittamore@gmail.com | Road | EveryMulti | 5018134679 | PO Box 1355, Benton, AR 72018 | | No | No | cul-de-sac on Parkview Drive floods when there is lots of rain -92.47862747 34.60893169 23 | Eastwood | Crooked Creek | 2 | 3 3 | 3 2.4 | 2.7 | 2.6 | 3.0 2.8 | 4.0 2 | .9 4.4 |
| 294 | DEBBIE BROADWAY | debbiebroadway@sbcglobal.net | Yard | EveryMulti | 5017657178 | | Email | No | No | Flooding in the open ditched in original Bryant from SE 1st-SE 3rd -92.48900015 34.59330074 11 | Original Town | Hurricane Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 295 | CJ THOMAS | cj7thomas@yahoo.com | Yard | EveryMulti | 501-463-3132 | 1003 Sunset Gardens East. Bryant Ar. | Phone | No | | -92.50423753 34.62306345 6 | Sunset Meadows/Gardens | Hurricane | | 0 0 | | | | | | |
| 296 | Travis Gasnier | travis.gasnier@gmail.com | Road | EveryMulti | 8705409469 | 72022 607 Crestwood Cove Bryant, AR 72022 | Email | No | Yes | May Sth, 2022 - Latest event but typically floods any time there is heavy rain. The drain along Commonwealth Rd backs up and water completely covers Commonwealth Rd. | West Pointe | Creek Crooked Creek | | | | | | | | |
| 297 | Thomas W. Woodall | thomaswoodallsr@comcast.net | HouseBusiness | EveryMulti | 501 772-1194 | 1613 Rodeo Drive Bryant 72022 | Email | Yes | Yes | This time the water did not make it up to my house but 6 or more times in the last 4 years and it confinues to be a problem. I understand hat when the house was built in 1998, the builder was supposed to raise the house level with the road but it is 2 feet below that and the City let him get away with it for these 3 houses on the end of Rodeo Drive. Storm water drains to our houses and -92.50816781 as no good way to drain from here and floods every time 2 inches or more falls. Several surveys have been done of the problem will little to no effort by the City to fix. It There is a Several system in th drain area and I have been told by the COE that if it is declared a flood zone the sever will have to be moved. | Woodland Park | Hurricane Creek | 0 | 0 1 | 1 0.0 | 0.0 | 0.0 | 0.0 2.3 | 0.9 2 | .8 1.1 |
| 298 | Joseph Slater | andyslater76@hotmail.com | Yard | Every6 | 501-804-4187 | 109 Monticello West Bryant, AR 72022 | Email | No | Yes | Concerns regarding runoff from nearby pond. A developer has installed some concrete and stone in the area to allow water to overflow in close proximity from the pond. The water that flows out of the pond goes between the homes on Pinnacle Drive and Abbie Lame in ad trahenie. The valer is eroding the soil and there's concern that if anything clogs the vaterway, the water will be redirected into the surround homes and back yards We have seen major flooding in the backyard before and the work done by the contractor has helped but the waterway that flows out of the pond needs to be reinforced with rock of gravel to ensure proper runoff into nearly relating pond in Monticello West. | Midtown | Crooked Creek | . 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 |
| 299 | Tiffany Flowers | tiffany_tipp@yahoo.com | Yard | EveryMulti | 501-837-3873 | 511 Martin Ln | Email | No | Yes | Flooding of street and yards92.49338556 34.58996548 N/A | Bryant Meadows | Hurricane Creek | 1 | 1 1 | 2 0.1 | 1.2 | 0.1 | 1.3 0.1 | 1.5 (| .1 1.6 |
| 303 | Robert Graves | robt.graves1952@gmail.com | Road | EveryMulti | 5018477003 | Bryant, AR 72022 3404 village green drive | Email | No | | With every light rain, the road at the curve on Village Green D floods. It has gotten worse since the business has gone in at Raymar Road, 30 South Frontage Road and the new cut through | Meadowlake | Crooked Creek | 2 | 2 2 | 2 0.4 | 1.5 | 0.5 | 1.7 0.6 | 2.0 | 1.7 2.1 |
| 304 | Laura Cheak | licheak@att.net | Yard | EveryMulti | 501-425-6355 | 3601 Dearborn Cir Bryant, AR 72022 | Email | No | Yes | just north of the Bryant Parkway overpass Our yard floods every time it rains. From February to August, we are unable to use our backyard because of the water running through it. We moved into this house in 1999. We started having problems when the houses were built behind us. At which time we were told by the city that upon completion of that neighborhood they would be putting in junction boxes and tying the storm drains into a lager line that would take excess rain water further away. Then it continued to get worse after the neighbors to our east and west installed french drains. Numerous calls to the city each time being told the budget was tight and they were working on drainage in neighborhoods to the west of us where people were actually getting water in their homes not just standing in their yards for weeks and months. The storm drain by our house just dumps out behind our fence. We were told they had plans to remedy that. Then there was drainage work in the neighborhood behind us and we talked to the the contractor but | West Pointe | Crooked Creek | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 305 | Peter Cunningham (First Southern Baptist Church) | Peter@fsbcbryant.org | Other | Every10 | 5018473014 | 604 S Reynolds Rd, Bryant, AR 72022 | Email | No | Yes | I will attach a picture. The storm water issue we had most recently was last summer after a HUGE rain / flash flood. There is a run off dich that enters the church property from Bryant Meadows, the drainage area has a concrete bottom, for quite a distance. The drainage ditch was dug by the city years ago when the neighborhood was built. In this instance, there was so much rain, og. 4,9235409 so fast that the dich became full and could not handle the water volume from the property. It did not allow the water to leave through normal flow. Thus it backed up into various parts of our building, entering under doors. It cost the church about \$1500 in expenses related to renting fans and dehumidifiers and a about 40 hours of volunteer hours. | Bryant Meadows | Hurricane Creek | 0 | 0 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | .0 0.0 |
| 306 | Nancy S Phillips | newyarkie@gmail.com | Yard | EveryMulti | 5013267680 | 1903 Mayapple Drive, Bryant, AR, | Email | | | The drainage along the western portion of Cherry Creek Circle I not good. Water stands in the gutters, and the yeards on both sides of the street stay VFRV muldy for days after periods of heavy of the street stay VFRV muldy for days after periods of heavy of | Cherry Creek neighborhood | Crooked Creek | 0 | 0 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | .0 0.0 |
| 307 | Mark Rogers | markr@daniellabel.com | Yard | EveryMulti | 501-838-0408 | USA 1004 Ruth Drive Bryant, AR 72022 | Email | No | | of the street stay VERY muddy for days after periods of heavy or extended rain Every time it rains, the corner of Ruth Drive and Milis Park Roar holds water for days (some times weeks) Even after the drainage ditch recedes from overflowing, the water in the road remains because the area between the drainage ditch and Ruth Drive is higher and there is no curb inlet from the road the allow the water tog or anywhere. Now that Mills Park has been repaved and is higher than Ruth Drive, the water now floods my yard much worse than it did before - the sidewalks at the corner stays full of water (and this is the cross walk that everyone is tryin to use a facility.) | Mills Park Road | Crooked Creek | | | | | | | | |

| 308 Connie Elder | connie@taxshelterinc.com | HouseBusiness | EveryMulti | 501-944-9700 | 2407 Raymar Road, Bryant, AR 72022 | Email | No | Yes | When developer built subdivisions that surround this property ther was insufficient storm drainage in the plan. This property has bee flooding my indiaws property for years. It crosses property and has no exit point other than the sitting in the back yards of our neighbors living on Lacross Street. We purchased our property in -92.46484276 March 2016 and reached out to Ted Taylor, City of Bryant Project. Engineer in 2019. He toured property and brought along Vermon Williams of GarNat Engineering. Mr. Williams provided us with a \$51,000 estimate of what it would take to property remove the storm water. I'm not sure if we were ever added to the project list. | Meadowlake | Hurricane Creek | 0 | 0 0 | 0 0 | 0.0 | 0.0 0 | 1.0 0.0 | 0.0 0 | 0.0 0.0 | 0.0 |
|--------------------------|-------------------------------|---------------|------------|--------------|--|-------|----|-----|---|------------------------------|--------------------|------|-----|-----|-----|-------|---------|-------|---------|-----|
| 309 Doris Sloan | dorisloan@gmail.com | Yard | EveryMulti | 501 516 8152 | 300 Dogwood Place, Bryant 72022 | Email | No | | My backyard has a storm drain in the SE corner. In heavy rain the yard floods and the ground is undermined at the drain, causing sink holes. I have had drainage gravel installed over what was -92.48780657 34.60534511 38 once grass, but was being eroded by the river that ran through it during heavy rains. | Dogwood Place | Crooked Cree | sk 0 | 0 0 | 0 | 0.0 | 0.0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 310 Horace. Henderson | henderson7485@yahoo.com | Road | EveryMulti | 501 213 5515 | 1025 Prickett Rd. Bryant At 72022 | Phone | No | Yes | Standing water that is a real problem for people walking or jogging in the street. Mosquito breeding another problei | Miller Place | Hurricane Creek | 0 | 0 0 | 0 | 0.0 | 0.0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 311 Yesis Reyes | yesis.reyes@gmail.com | Road | EveryMulti | 5015293057 | 1813 Briarwood cove | Email | No | Yes | I've noticed that when it rains I have a pool of water at the end of my drive way. Pretty much our whole cul de sac is like that. I do n have a way of getting in do if easily since I do not have anyworker to put the water in. I hope this helps get it fixed. N/A | Edgewood | Crooked Cree | ek O | 0 0 | 0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 312 Joseph Loghry | Cjloghry@gmail.com | Road | EveryMulti | 5016588303 | 2307 Pleasure Dr Bryant, AR 72019 | Email | No | Yes | Water standing in street and ditches for days after rain. Standin- water in ditches never dries up. Repair crews made the ditches worse about 2 years ago 34.63164293 N/A | Crystal Valley | Hurricane Creek | 0 | 0 0 | 0 | 0.0 | 0.0 0 | 1.0 0.0 | 0.0 0 | 0.0 | 0.0 |
| 313 Angel Murphy | guardianangel042000@yahoo.com | Road | EveryMulti | 5012135267 | 465 Windrush Point Alexander, AR | Email | No | No | The intersection of Rudolph and Hilldiale floots. The water cover the road making it impassable. It seems as if the storm drain is full -92.48773139 34.6570108 25 of debris and overgrowth of the woods | Hilldale Road | Owen Creek | k 0 | 0 1 | 1 1 | 0.0 | 0.0 0 | .0 0.0 | 3.0 1 | 1.1 3.2 | 1.5 |
| 314 Tracy Kirby | tracykirby@att.net | Road | EveryMulti | 5012136874 | 812 Hilldale Rd | Phone | No | No | Covert across from house is not large enough to handle drainag from road and roundabout. Need to replace covert similar to the one going into the neighborhoo 34.64394768 27 | Hilldale Road | Owen Creek | k 0 | 0 1 | 1 2 | 0.0 | 0.0 0 | .0 0.0 | 1.7 1 | 1.1 1.9 | 1.6 |
| 315 Garey Scott | topretired@gmail.com | Road | EveryMulti | 870 267 5348 | 2021 Cherry Creek Circle Bryant, AR 72022 | Email | No | | I walk most days about 4 times around the Circle and I see watt flowing into the drains, water in the streets and yards that look to he flooder. N/A | Cherry Creek neighborhood | Crooked Cree | ak 0 | 0 0 | 0 | 0.0 | 0.0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 316 Josh Cox | Cox_josh@comcast.net | Yard | EveryMulti | 5019439455 | 2317 Cherry Creek Cir. Bryant AR 72022 | Email | No | No | The entire west side of Cherry Creek Cir. First moved to this home in 2005 and there would be standing water in the road that never drained. The city fixed it by grading the roadway to move the water to the west side of the street which resulted I. The East side Iosin its curbing and all of the water now being moved from the roadway into the yards on the west side of the road. Their yards are constant mud plis and have standing water almost year round. There needs to be drainage installed to route the water to the drainage dich which runs to the creek. With all the new construction across Shobe the water is going to get worse. | Cherry Creek neighborhood | Crooked Cree | ak O | 0 0 | 0 | 0.0 | 0.0 0 | 1.0 0.0 | 0.0 0 | 0.0 0.0 | 0.0 |
| 317 Rebecca Taber | becksoptin@gmail.com | Yard | Every | 8706882780 | 1609 S Lea Cir Bryant AR 72022 | Phone | No | | As a rule of thumb, every time rain fall causes water to cross over Boone Rd near the little church or over the Bishop Park bridge our yard and parts of Lea Cir flood. When there are heavy rain falls in a short amounts of time our yard and street will flash flood. My property will flood from the back due to the overflow on Boone Rd near the church, which I understand to come from Hurricane. This has caused significant flooding to my barm area and has damaged fencing. We purchased this home in 2007 and were not include in the floodzone requiring flood ins, but that changed for us in 2020. | Near Boone Road | Hurricane Creek | 1 | 1 2 | 3 | 0.5 | 0.7 0 | 1.3 | 0.7 2 | 2.8 0.7 | 3.4 |
| 318 Tiffany Flowers | tiffany_tipp@yahoo.com | Road | EveryMulti | 501-837-3873 | 511 Martin Ln Bryant, AR 72022 | Email | No | Yes | Flood water location is on Martin Ln. The water rises up into the yards close to the cars, trucks, and garages -92.49337751 34.58995886 N/A | Bryant Meadows | Hurricane Creek | 1 | 1 1 | . 1 | 0.1 | 1.1 C | J.1 1.2 | 0.1 1 | .4 0.1 | 1.5 |
| 319 Reagan McKinley | | HouseBusiness | EveryMulti | 870-703-1976 | 801 SW 3rd St | Phone | No | Yes | Ditches and culverts are not draining. Road, Yard, Garage a flooded previously due to this issue. Every time it rains. Please call -92.49811011 34.59251435 N/A | Morden | Hurricane Creek | 0 | 0 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 320 The Ferguson's | | Yard | EveryMulti | 870-703-1976 | 802 Southwest 3rd St. Bryant, AR 72022 | Phone | No | Yes | Please call 870-703-1976 to discuss. Please call 870-703-1976 to discuss. Rain does not drain through ditches and culverts. Rain floods yard, road, driveway every time it -92.49814339 34.59295327 N/A | Morden | Hurricane Creek | 0 | 0 0 | 0 | 0.0 | 0.0 C | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 321 Matt Phillips | matt.phillips@carkw.com | Yard | EveryMulti | 5015290230 | 2312 Carywood Dr | Phone | No | Yes | Water stands during winter and after rain through out the year. Th curb has settled which does not allow water to drain down grade -92.48842499 34.61603916 37 | Carywood/Raintree Acres area | Crooked Cree | ek 0 | 0 0 | 0 | 0.0 | 0.0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 322 sarah griffiths | stonegriffiths@yahoo.com | Road | EveryMulti | 5014257471 | 1704 Forrest St Alexander AR 72002 | Mail | | | Cannot drive through Hilltop Rd closer to the Hilldale end during heavy rains. Especially in front of 810 Hilltop Rd | Hilltop Road | Owen Creek | κ 0 | 0 C | 0 | 0.0 | 0.0 C | J.O 0.0 | 0.0 0 | 0.0 | 0.0 |
| 323 NATHAN R WILSON | nwilson705@gmail.com | Yard | EveryMulti | 5012531959 | 6510 Springhill Rd | Phone | No | Yes | When Springally Illiage Drive was built it caused my property to start flooding. We have pictures of the flooding, issue that takes u a great profine of our yard running next to Springilly Illiage Dr Water coming down the hill from the north floods the area next to the Springilly Illiage sign on the corner, then turns down our yard to the east to flow into the open creek which then floods that end (our property. | Springhill Village | Hurricane Creek | 0 | 0 0 | 0 | 0.0 | 0.0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 324 Janet A Shuttleworth | janken981@yahoo.com | Yard | EveryMulti | 501-765-3109 | 2112 Cherry Creek Circle Bryant, Ar. 72022 | Phone | No | Yes | Damaged storm drain that runs from the street through our front, side, and back yard has caused catastrophic erosion in our yard and in turn has damaged our shed in our backyard. I emailed our mayor regarding this issue in June 2021. He contacted Turn Fournier, Public Works Director. We were told in order to work on the drainage piping, we would have to "give temporary construction easement" and with "curner project load, it would be 2-3years before We can get to this project." I still have a copy of the emails and pictures I sent. The yard erosion and damage continues to worsen because of the danged storm drainage system that runs through our yard. Please help us! | Cherry Creek neighborhood | Crooked Cree | ж 0 | 0 0 | 0 | 0.0 | 0.0 0 | 1.0 0.0 | 0.0 0 | 0.0 | 0.0 |
| 325 Stephen Williams | Willjc74@gmail.com | Yard | EveryMulti | 5017222841 | 2414 Cherry Creek Circle Bryant, Arkansas 72022 | Email | No | | Every rain we have brings standing water in our back yard due to runoff from our neighborhood. All the water from our neighborhood entrance runs through our yard and into my neighbors yard causing very soft areas and mosquibes. We also have standing water on Shobe Rd close to our property boundaries. | Cherry Creek neighborhood | Crooked Cree | ∌k 0 | 0 0 | 0 | 0.0 | 0.0 0 | 0.0 | 0.0 0 | 0.0 | 0.0 |
| 326 Tim Lenahan | Timothy.Lenahan@me.com | Yard | EveryMulti | 501-413-0817 | 3514 village green drive Bryant, AR 72022 | Email | No | Yes | Storm water floods my back yard every time it rains. Water cover half my yard, 2-3 feet deep, and stays for days, which is a health hazard due to mosoulose: 34.6262475 18 | Meadowlake | Crooked Cree | ak 0 | 0 1 | 1 1 | 0.0 | 0.0 | 0.0 | 0.3 0 | 0.4 | 0.6 |
| 327 Donald Shauger | Clachef89@icloud.com | Yard | EveryMulti | 862-293-8120 | 3600 village green drive Bryant Arkansas 72022 | Phone | No | Yes | Raymar rd floods the water comes off the road and behind our houses and sits for weeks on end causing mosquitos bugs and snakes, we all have kids and this is very dangerous this is the responsibility of the town to help with it is not on the 5 acres behin - 92.46840766 and the responsibility of the town to help with it is not on the 5 acres behin - 92.46840766 and the responsibility of the town to help with it is not on the 5 acres behin - 92.46840766 and the responsibility of the town to help with the flooding the water comes from Raymar road and floods the whole street into the pond but if goes through our yards and makes it unlivable. | Meadowlake | Crooked Cree | ak O | 0 0 | 0 | 0.0 | 0.0 0 | 1.0 0.0 | 0.0 0 | 0.0 | 0.0 |
| 330 Carolyn Slater | carolyn_a_siater@hotmail.com | Yard | EveryMulti | 8658035610 | 89 Pinnacle Drive, Bryant AR 72022 | Mail | No | Yes | Front yard is standing in water with any hard rain-the rainwater cannot get to the drainage system in the street. I also get all the rainwater draining from other (highert) yards. A virtual river runs from all that rainwater as a small river thru to back yard where it makes its way thro other backyrads trying to make its way to the drainage ditch behind my house. When heavy rain occurs, my fence is 3 ft under water adjacent to the said drainage ditch. I have concerns as well about the pond behind the cut de sac in which I live in Stoneybrook SD. The developer seems to be attempting to reroute the overflow to "said drainage ditch". With the issues I am having and the lack of oversight and involvement with agencies who can provide the knowledge and laws to cause the developer do what needs to be done, we may as well be living way out in the county on a farm. But we are living in the CITY OF BRYANT in a very large subdivision. I feel like I have a dark cloud over my headjust waitin | Midtown | Crooked Cree | ək O | 0 0 | 0 | 0.0 | 0.0 0 | 1.0 0.0 | 0.0 0 | 0.0 | 0.0 |

| 331 | Janet bass | Janetbass58@gmail.com | HouseBusiness | Every5 | 5018605860 | 1709 hidden creek drive, Bryant AR 72022 | Email | Yes | Yes | The water from hidden Creek can flood over the bridge and onto the front of my property. This last year it flooded my house. I had my house in a upheaval state for approximately four months. When I bought the house I was told that it had flooded a couple of times before, but that the issues were not something that would be repeated (for example, once they said it had some kind of construction cause). Apparently that was not true. Also, The drainage culvet ends behind my property and there are trees and growth that seem to block it which may contribute to it not flowing nicely. I don't have photos of the flood, but I have photos of the drainage that has growth in it or where the concrete stops. Last year when it flooded, I believe the check that insurance wrote was for approx \$50k. | -92.50757261 | 34.61745571 | 7 | Hidden Creek | Hurricane Creek | 0 0 | 1 | 1 | 0.0 0 |).0 0.0 | 0.0 | 2.2 0.7 | 2.6 1.0 |
|-----|-------------------|-----------------------------|---------------|------------|--------------|---|-------|-----|-----|--|--------------|-------------|-----|---------------------------|--------------------|-----|---|---|-------|---------|-----|---------|---------|
| 332 | Leslie Witt | leslie.hudgeons@gmail.com | Yard | EveryMulti | 4798860543 | 2013 cherry creek cirlce, Bryant, AR 72022 | Phone | No | Yes | Our front yard is slightly sloped to the street and any time it rain water drains and sits at the front of our yard. It stays muddy for up to a week after rain almost making it impossible to mow the front half of our yard. | | | | Cherry Creek neighborhood | Crooked Creek | 0 0 | 0 | 0 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 333 | Han cho | Evan1004us@gmail.com | Road | EveryMulti | 501-772-0880 | 2500 cherry creek cir Bryant AR 72022 | Email | No | Yes | Every time rain comes, there are water in front of my lot and mes with soils until it dries out for several days. Aspalt road is broken and cracked, puddled with. Definitely needed a repair or replacement of road here The neighborhood storm drains are either not large enough | -92.47568709 | 34.61274265 | N/A | Cherry Creek neighborhood | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 334 | Karen Bonvillain | keymckissock@yahoo.com | Yard | EveryMulti | 5012475221 | 1520 Pleasant Pointe Circle Bryant, AR 72022 | Email | No | | damaged, or have a blockage at the outfall. When there is a large amount of rain in a short period of time or a long rain event all of the water ends up at the south end of the neighborhood, flooding yards. | -92.49765327 | 34.58135012 | N/A | Pleasant Pointe/Cedarwood | Hurricane Creek | 1 1 | 1 | 1 | 0.5 0 | 0.9 0.6 | 1.0 | 0.8 1.2 | 0.8 1.3 |
| 335 | Chalsie Sublett | Thesubletts@yahoo.com | Yard | EveryMulti | 5015292169 | 807 Allyson Avenue Bryant Ar 72022 | Email | No | Yes | Side and back yard flood every time we get a good rain. We were told it's because a neighbor has a public drain either way it's a mess! Our privacy fence is taking damage because of it. | | 34.58767573 | N/A | Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 336 | Ron Abrahams | | HouseBusiness | Every2 | 479-857-0160 | 2616 Carywood Drive | Phone | No | | Based on Phone Call 5/12/2022: Water flows down Carywood, crosses from the west side of the road to the east side, and goes over the curb and flows between house his house and the house to the north. The house to the north has been flooded 'fuff is foundation'. Don's house has had a little bit of water in it. He has talked with the city about this 2 years ago and he though a project was going to be done to fix. | | 34.61864434 | 36 | Carywood/Raintree Acres | Crooked Creek | 0 0 | 0 | 0 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 343 | Debbie Fannon | fannondebb@yahoo.com | Yard | EveryMulti | 501-366-3111 | 1723 Kensington Dr Bryant Ar 72022 | Phone | No | Yes | No culvert on our cove. All storm water drains into our yard. Soil erosion so bad it was causing major damage. Paid 10,000 to have trench installed. It helps but still a huge problem. Fence and trees are coming down. Reported it before. | -92.51009711 | 34.62767073 | 6 | Forest Cove | Hurricane Creek | 0 0 | 0 | 0 | 0.0 C | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 344 | Billy R Hardin | billhardin@att.net | Yard | EveryMulti | 501-658-0519 | Billy R Hardin 706 Sanders Ln Bryant, AR 72022-3732 | Email | No | No | I have a French drain underground that takes water from my back yard area to the front yard bordering Sanders Lane. The water from my yard and water running south on Sanders Ln collide at my driveway. There is no pathway going on south along street for the water to move on to the storm drain at the intersection of Sanders and Griffis. The water backs up and covers my backyard patio and can come into my house. | -92.49579025 | 34.58848705 | N/A | Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 345 | Jim Gass | Jgass11713@yahoo.com | Yard | EveryMulti | 903-949-9209 | 2513 Johnswood Village Drive Bryant, AR 72022 | Phone | No | Yes | Drainage pipe running through yard is not properly sized c discharging. Pipe raises out of the ground during heavy rain event: We moved into our home in October and with the recent rains, w | -92.46953084 | 34.61592048 | 22 | Johnswood Village | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 350 | Matthew Burks | radioscottshady@yahoo.com | Yard | EveryMulti | 5013179416 | 412 Bryant Meadows Drive | Email | Yes | | discovered that water severely pools all over our yard, so much that you can't walk to our front door without getting the tops of your shoes wet. In light of this, we hired a crew to put in French Drains. When they surveyed, they showed me where there are no storm drains on our road. I then noticed, nobody in our entire neighborhood as one. I had to \$7,000 (including \$500 for the contractor to get a city permit) to get drainage to a storm drain which is way behind our property, through Bryant House senior living center. | | 34.59059456 | N/A | Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 351 | William Knauf | bill_knauf@yahoo.com | Yard | EveryMulti | 501-557-8555 | 2400 Cherry Creek Circle | Email | No | | The street in front of my house needs repair several times a year due to underground springs causing road to fall apart. It is again showing signs. Also, my yard and that of my neighbors gets so wet that several neighbors won't mow their lawn due to their lawn mower sinking into the mud. Yesterday I tried to move of their yards and had to give up after 3/4 of the yard as both my mower and my feet were sinking so bad. I have lived here almost It years and I know my yard never needs o be watered due to how damp the soil is. This is a problem for both the yard and street. | | 34.61181498 | N/A | Cherry Creek neighborhood | Crooked Creek | 0 1 | 1 | 1 | 0.0 0 | 1.0 0.9 | 0.5 | 0.9 0.6 | 1.0 0.6 |
| 352 | Danny Grupa | dannygrupa@gmail.com | Other | EveryMulti | 501 722 3356 | 710 southwest 3rd Bryant, AR 72022 | Email | No | Yes | The city has continuously dug my ditch deeper and deeper to where it holds water or mud constantly and is impossible to maintain. | -92.49758306 | 34.59293717 | N/A | Morden | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 353 | Steven D Epperson | sdepperson@gmail.com | Road | EveryMulti | 5016587956 | 3319 MEADOW CREEK DR | Phone | No | | THE STREET DRAIN BESIDE MY DRIVEWAY HAS COLLAPSED, ALONG WITH THE CONCRETE. THE DRAIN FLOWS INTO A DRAINAGE EASEMENT ON THE BACK OF MY PROPERTY, AND AS YOU FOLLOW THE EASEMENT TOWARDS SHOBE ROAD, THE DRAINAGE IS BLOCKED WITH DEBRIS SUCH AS CONCRETE PIECES AND OVERSROWN VEGETATION. THIS MAKES THE WATER STAND AND STAGNATE INSIDE THE EASEMENT, AND ALSO BREEDS MOSQUITOS. THE EROSION ALONG THIS DRAINAGE EASEMENT HAS ALSO CHANGED THE GRADE SO THAT WATER CANNOT CONTINUE FLOWING TOWARDS SHOBE ROAD. DURING HEAVY RAINS, THE ROAD FLOODS, AS WELL AS THE PORTION OF MY DRIVEWAY BY THE STREET. THERE IS ALSO AN OLDER PIPE THAT WENT UNDER THE STREET BY MY DRIVEWAY THAT HAS COLLAPSED, AND LET'S EVERAL DEEP HOLES IN THE GROUND WITHIN A COUPLE OF FEET OF MEADOW CREEK DRIVE. THIS AREA IS A DANGER TO CHILDREN PLAYING, AS WELL AS THOSE WHO RIDE BICYCLES ALONG THE | -92.45556508 | 34.63363102 | 34 | Lexington Park | Crooked Creek | 0 0 | 0 | 0 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 354 | Michael Thompson | Double.dragon.mgt@gmail.com | Other | Every | 5018135168 | 1601 South Lea Circle Bryant, Arkansas 72022 | Phone | No | | Flood water in barn, yard is often damaged by flood debris from other peoples property. An approximate 8 foot steel gate was torn from someone else's property and washed up under the bridge th goes over the water run off creek dividing my property. The water and the gate damaged my bridge. | -92.5069324 | 34.59274879 | 13 | Near Boone Road | Hurricane Creek | 0 0 | 0 | 0 | 0.0 C |).0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 355 | Emilie Monk | Emonk8@att.net | HouseBusiness | EveryMulti | 501-920-1717 | Emilie Monk 1301 Boone Road Bryant, AR 72022 | Phone | No | Yes | Water comes across Boone Road from Richardson Place Subdivision and straight down hill. It started this after new road we replaced. A culvert was put under street and drains into my yard. It has caused my house to settle and I had to have Oishan to raise in I need the ditch replaced that was on the other side of the road. Water stands under my house causing mildew and moisture. I never had problems until so much building has taken place up steren. I've lived here over 30 years. I need the ditch replaced across the street. Every time it rain 1/2 inch it floods. | i I | 34.59503981 | 12 | Boone Road | Hurricane Creek | 0 0 | 0 | 0 | 0.0 0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 356 | michaelreade | readeauto@yahoo.com | Other | EveryMulti | 15018476364 | 1801 n Reynolds rd or PO box 28 | Phone | No | No | the culvert is collapsed under dive way at reades automotive have culverts to replace but been argueing with state hwy department if over 1 year to get them put in are stiting by road and ready to be install this would help the drainage on reynolds rd some thanks manager of reades automotive | | 34.6105193 | N/A | Big Oak | Crooked Creek | 0 0 | 0 | 0 | 0.0 0 |).0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 357 | Dorothy Weaver | dorothy.weaver@att.net | Yard | EveryMulti | 5012135066 | 108 Canyon Way Bryant, AR 72022 | Email | No | Yes | The ditch was moved years ago from the property behind the houses to the current location, but there was no rock or anything t prevent the washing out of sides of the ditch. Eventually this will cause fences to be unioned if this washing continues | -92.48728818 | 34.63851089 | 29 | Magnolia Village | Owen Creek | 0 0 | 0 | 0 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 358 | John Johnston | pastorjohnj618@gmail.com | Road | EveryMulti | 501-213-6793 | 67 Crain Drive | Phone | No | Yes | At the corner of Crain drive and Craig street every time it rain heavy it floods in that corner and floods back into our yard not adequate amount of transition from one street to the other for drainage | -92.49384958 | 34.5989324 | 40 | Southwood Acres | Hurricane Creek | 1 1 | 1 | 1 | 0.0 0 | 1.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |

| 35 | 9 [| Danny Grupa | dannygrup@gmail.com | Other | EveryMulti | 5017223356 | 710 sw 3rd Bryant, AR 72022 | Email | No | Yes | The city has constantly dug my ditch deeper and deeper. constantly holds water or mud and is impossible to maintain. It has -92. | 2.49758306 | 4.59293717 | N/A Morden | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
|----|--------|-------------------------------------|-------------------------------|---------------|------------|--------------|---|-------|----|-----|---|--------------|------------|----------------------------------|--------------------|-----|---|---|-----|---------|-----|---------|---------|
| 36 | о с | Cara Brookins | cara@carabrookins.com | Road | EveryMulti | 5017657041 | 2107 Hickory Dr Bryant AR 72019 | Email | No | Yes | been dug lower than the culverts Culvert under street completely filled with dirt and rocks. Ditch pile with dirtrocks from flooding. Damage to yard, driveway, from repeated failed attempts to solve the ongoing flooding problem for 15 years. Water covers driveway and road during even mild storms. The solutions to date have made mowing and yard management impossible. Shades have infested the area. We need a long term solution for this mess. I would like to be involved in the process of creating a plan that can be executed and maintained. It's frustrating to deal with this for so long with no viable solutions. | 2.51249974 3 | 4.63878693 | N/A Hickory Hill | Hurricane Creek | 1 1 | 1 | 1 | 1.9 | 1.0 2.0 | 1.1 | 2.5 1.3 | 2.7 1.4 |
| 36 | :1 KE | EVIN BETHEA | bethea_kevin@yahoo.com | Yard | EveryMulti | 8707232619 | 6150 Remington Drive, Bryant, AR 72022 | Email | No | Yes | Water is not draining properly because storm water basin in subdivision is not maintaned by city or subdivision. A person that lives in subdivision yard was flooded. There are huge rats living in that basin because it is not maintained. Another comment would 4 Jab be that the city needs to keep shoulders on major roads cleared other than moving 18 inches on the sides of major roads, that would cut back on roads in general flooding. | 2.51796875 | 4.65829756 | N/A Remington Place | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | | KRYSTYNA REINHARDT | krystynareinhardt@gmail.com | Yard | EveryMulti | | 2713 Johnswood Village Drive. Bryant, AR 72022 | Email | No | Yes | After rain. Nothing crazy, no storm. There is one foot of water that is sitting at my fence line and doesn't go anywhere for a full day dr so. Provided it doesn't rain anymore. If there is a storm with heavy rainfall. Then there is much more water in that location. The property behind us also has sitting water for days. The subdivision has a retention pond, but never has any water in it. The back side of multiple properties need to be addressed and have that water directed towards our retention pond. Also there have been a few times with heavy storms that the culdesae would have standing water during the storm and start moving up to the driveways. Maybe not draining correctly? | 2.46920545 3 | 4.61449016 | 22 Johnswood Village | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | 3 G | reg Whitehead | greg@controlledautomation.com | Yard | EveryMulti | 5017496897 | 501 Sanders Lane Bryant, AR 72022 | Email | No | Yes | Culvert under street is undersized allowing water to backup int yard creating a major problem with flooding the entire yard, -92. | 2.49512003 | 4.59063835 | N/A Bryant Meadows | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | 4 | Melissa Lee | mtlee501@gmail.com | Yard | EveryMulti | 479-518-6396 | 200 Ethel Drive Bryant, AR 72022 | Phone | No | Yes | including several neighbors flooding -92. | 2.49710009 | 4.61152367 | N/A Big Oak | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | 5 Lor | ri Anne Dilatush | | Yard | EveryMulti | 15014125815 | 4323 S Shobe Road | Email | No | Yes | The most resent time my back yard was flooded was April 13, 2022. The ditch that runs on my property comes from my neighbor's backyards out to S Shobe Road where it continues to flood. My backyard along with my spare lot has deep standing -92 water in which I am unable to measure due to safety reasons. Every time there is a heavy rain the flooding becomes an issue. Please review the attached pictures. | 2.45410705 | 4.63307186 | 34 Lexington Park | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | 6 F | Rachel Cotton | okarkcotton@yahoo.com | Yard | EveryMulti | 9188297988 | 2710 Lavern Street Bryant AR 72022 | Email | No | Yes | There is a storm water ditch in my front yard at the road. Th culvet under my drieveay is blocked resulting in water running back to my yard. We are down hill so this tends to be a very significant amount of water flooding our yard, driveway, porch steps, as well as our neighbors yard. I have had to relocate my Camaro several times due to the flood level and the running water across my drievway. The driveway is 4-5 inches raised above soll =92. level. There is a major mosquito problem here that I'm sure is from this issue and resulting standing water that never seems to completely dry out. I rent this home and am not sure if this is owner responsibility or | 2.49020576 | 4.61647647 | 37 Carywood/Raintree Acres area | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | 7 | Julian owen | Julianowen2000@gmail.com | Yard | EveryMulti | 5017723890 | 4322 Lexington park circle Bryant Ar 72022 | Email | No | No | city Behind my home behind the fence when we get heavy or regular rain the drainage floods coming into my yard and shed. My fence is ruined/ rotted and shed as had a new floor. I've raised my shed 5 inches. So it is 8 inches from ground. So at least 7 -92 inches of flood water approx 25 feet from back fence. I hope I can get a response. I've not been happy with the lack of help from city or the mayor scott. | 2.45608408 | 4.63315444 | 34 Lexington Park | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 36 | 8 Mid | chael & Tamara Guffey | tama_guff@yahoo.com | Other | | 501 350-7732 | 1302 Ashlea Place Drive Bryant, AR 72022 | Phone | No | Yes | Open drainage easement is washing away soil and has a lot of erosion. Large pieces of the bank have fallen off. We have paid to re-sod and reseed the embankment with more vegetation which does not work because the water rounds the corner too swiftly on that side and also receives additional water from another incoming drain that dumps at that corner of the yard. We mow it to keep the snakes away. Last summer my husband fell into the creek when the ground under him broke of the province of | 2.50575181 | 4.62392552 | 6 Sunset Meadows/Gardens | Hurricane Creek | 4 4 | 4 | 4 | 7.0 | 1.9 7.5 | 2.2 | 8.7 3.0 | 9.1 3.2 |
| 36 | 9 | Elisa Smith | Elisamsmith60@yahoo.com | Yard | EveryMulti | 5013505597 | 1408 Pleasant Pointe Circle Bryant, AR. 72022 | Phone | No | Yes | May 2021 (last time I took pictures) but pretty much floods every time it rains. My back yard floods and the water comes up halfway to my house sometimes it is a foot or more deep. Has done this ever since I bought my house in 2008. Before the house behind me was built complained to the city and someone came out and looked at the problem. Said they talked to the builders and builder would make a didth to help with the problem. Only thing builder did was build up the ground so the house he was building was higher. | 2.49720252 3 | 4.58234127 | N/A Pleasant Pointe/Cedarwood | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | | n Willix c/o Willix Family Trust | Jwillix@cbrpm.com | Yard | EveryMulti | 501-804-4761 | 3005 Glenbrook St Bryant , AR 72022 | Email | No | Yes | 5/22/2022. Front yard. Insufficient drainage under the street. Deepest spot 2 ft tappering towards the house to 0 ft about 15 foot -92. from house. | 2.51486679 | 4.62255107 | 5 Sherwood Park/Sherwood Estates | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | 1 | Ting | inti528@yahoo.com.hk | HouseBusiness | Every2 | 501-410-3505 | 3317 STILLMAN LOOP, BRYANT, AR 72022 | Email | No | | We moved in to this house in May 2016. The first flood was April- 2017 and then again April-2021. There were 3 inches of water inside our house(whole living room, dinning room, media room and one storage room were all flooded) both time. There is a draining path on the right side of our house for the whole neighborhood and sit seems it's not very effective. The flood happened to our next do neighbor as well. I do not have pictures of the flood as I was carrying my linfant as It ly to get the water out of my house. | 2.51495472 | 4.62480161 | 5 Springhill Manor | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | 2 Lang | gdon "Buh" Jones | buhjonesband@gmail.com | HouseBusiness | | | 3508 Village Green Dr. | | | | My house and the neighbors house both flood when it rains heavy -92 | 2.4683215 | 4.62607402 | 18 Meadowlake | Crooked Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | 3 (| Chante Tyson | tysonchante@yahoo.com | HouseBusiness | | 5017726065 | 201 Crossing Place Bryant, AR 72022 | | | | I've lived in Oak Glen for about 5 years and my house is next to the creek in the back. I've spent a lot more money than planned during storms that affected an entire area of my home due to flooding. Please consider my recommendation to begin the drainage system in Bryant! If I need to submit anything else let me know thanks Chante Tyson | 2.48025615 | 4.64578109 | 30 Oak Glenn | Owen Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | 4 De | nise Townsend | denise.townsend@gmail.com | Yard | EveryMulti | 5018477234 | 3210 Independence Circle Bryant, AR 72022 | Email | No | | City owned drain in out backyard is not capable of controlling the water. Retention pond overflows every time it rains heavily. The water has come up to our house and almost entered. | 2.50350504 | 4.62428985 | 6 West Pointe | Hurricane Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | 5 F | Hannah Diotte | hannahsmothers98@gmail.com | HouseBusiness | EveryMulti | 5012850065 | 50 Wagner St. Bryant, AR 72022 | Email | No | | Summer 2021 the storm drain was incapable of handling floodwater capacity. Our entire home flooded with water at least 2 in. deep throughout. Our entire outdoor property floods with any/all rainfall. | 2.49765355 | 4.59009764 | 40 Southwood Acres | Hurricane Creek | 0 1 | 1 | 1 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |
| 37 | 6 | James Cox | jclakersfan@icloud.com | Road | EveryMulti | 5016268266 | 1318 Crossing Loop | | | | I moved to 1318 crossing loop in Bryant at Back of oak Glenn in 2016. Creek was tiny and way away from my home yet w all the construction it is huge now and has flooded the neighborhood streets nearly every year at least once. Raging rapids and people having to be rescued by boats even. It's not sat s-2. and causes stress to us all. It's come up to halfway up my driveway multiple times and in no where close to the creek. City should not of allowed these Rausch Coleman houses to be built there but we love our street and just want it fixed. | 2.47963036 | 34.6443003 | 30 Oak Glenn | Owen Creek | 0 0 | 0 | 0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |

| 377 | Jennifer Thompson | jennifertcarson@gmail.com | Yard | EveryMulti | 5019443590 | 1000 Flametree Drive Bryant, AR 72022 | Email | No | | During medium to heavy storms, 4-5 streams form in our neighbor's yards uphill from us and flow from the neighbor's yard immediately into our back yard. These streams saturate our backyard and form pools of water. It takes days and sometimes weeks for this to dry out. The water in our front yard drains straight through our yard and into our neighbor's driveway, which has resulted in damage to the driveway and flooding to the garage. The character of our yard has changed distinctly within the last several years and we have concerns about the foundation of our home. One thing we'd like to note is there is an easement behind our fence that is supposed to run the length our street. In the event the easement could be used to somehow direct water to a storm drain the easement is blocked by fences and leaves and will need to be cleared. | Carywood/Raintree Acres | Crooked Cree | k O | 0 0 | 0 | 0.0 0 | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
|------------|----------------------------------|--|---------------|------------------------|------------------------------|---|-------------|----------|-----------|--|---|--|-----|-----|---|--------|--------|-------|--------|---------|
| 378 | John Baldwin | jbaldwin@eastersealsar.com | Yard | EveryMulti | 5019510516 | 4009 Commonwealth Dr. Bryant, AR 72022 | Email | | No | The storm drainage comes from the streets above my home and during heavy rain, the yard floods and the water jumps the curbs on Commonwealth and Robinwood into my front and backyard. W also receive water from the apartments behind my property. The storm drain in front of my yard and the house on Robinwood does not keep up during heavy rains | Stoneybrook/Springhill Acres | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0. | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 379 | Justin Lee Hill | justin_hill@yahoo.com | Yard | EveryMulti | 5019432799 | 603 Mills Park Rd. Bryant, AR 72022 | Email | No | | I bought my home in 2001 and have never had the problems I have had in the last 8 months because of drainage issues. The erosion has damaged trees, fencing and now I am getting cracks the walls. My fence is a foot lower or one wise decompared to the other. I am at the bottom of the hill so I'm getting everything that should be going through the drainage system that has failed. I also -92.48198098 and a should be going through the drainage system that has failed. I also -92.48198098 and the special state of the second of the state of the second of the secon | Bloomfield Hills | Crooked Cree | k O | 0 0 | 0 | 0.0 0 | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 380 | Karma Smoke | karma.smoke@gmail.com | Yard | EveryMulti | 5018402430 | 2317 Chelsea Dr. Bryant, AR 72022 | Email | No | | My house has settled 5 in on the backside due to the lack of drainage from the rain water. My back porch concrete has dropped -92.48781345 34.61607873 37 | Carywood/Raintree Acres area | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 381 | Keith Banks | kgbanks@yahoo.com | Yard | EveryMulti | 8707182806 | 3513 Henson Place Bryant, AR 72022 | Email | No | | and cracked. My driveway is raising up unevenly and cracking My back yard is in a constant state of flooding. It wasn't like that this time last year. It hasn't rained in days, yet I still have standing water in my backyard. My front yard is consistently soggy. The street in front of my house is always wet. That is creating cracks in the asphalt and its effecting my property. | Springhill Manor | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 382 | Kevin Bethea | bethea.kevin@yahoo.com | Road | EveryMulti | 8707232619 | 6150 Remington Dr. Bryant, AR 72022 | Email | Yes | | water is not draining properly because area is not maintained t city or subdivision. A person that lives in subdivision house was flooted. N/A | Remington Place | Hurricane Creek | 1 | 1 2 | 2 | 2.6 0 | 9 2.7 | 1.1 2 | .9 1.5 | 2.9 1.7 |
| 383 | Paul n Moropoulos | dogtags11@hotmail.com | Yard | EveryMulti | 5012130134 | 706 Holly Lynn Dr. Bryant, AR 72022 | Phone | No | | The natural flow of water on Ruth ave. has diverted itself is between 701 and 703 Ruth ave. and travels into my yard. This habeen causing flooding and erosion and at times the depth is almo 12 in. | Park Hill | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0 | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 384 | Sharon Steele | steele.sharon@ymail.com | Yard | EveryMulti | 5018020944 | 42 Neal Cv. Bryant, AR 72022 | Email | No | | Yard floods every rain and retains moisture even in dry climate. water is at least ankle deep at minimum during time of flooding. 92.48850713 34.61196359 N/A | Bryant Oaks | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 385 | Jeffery Brown | gphodwild66@gmail.com | Yard | EveryMulti | 5017650369 | 705 SE 1st St. Bryant, AR 72022 | Email | No | | Two storm drains dump into our backyard and over the years have eroded half of our backyard. We extended one of the pipes at our -92.48279956 34.59541411 33 expense or more of the yard would be gone! | Hidden Forest | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0 | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 386 | Ralph Williams | willaims7732@sbcglobal.net | HouseBusiness | Every10 | 5017724633 | 1727 Hidden Creek Dr. Bryant, AR 72022 | Phone | No | | My entire home has been flooded twice, 1st in 2008 and 2nd in 2017. My garage has been flooded 5 times but the water receded before it entered the house. Storm water travels down Pine Meadow Dr. from highway 5 and from the property of the funeral home and over the curb into my yard. The drop inleit in the intersection of cannot handle the high degree of storm water so th water floods my home. Storm water also overflows the creek on hidden creek dr, and backs up to my house and joins the storm water from pine meadow. It would help is the creek that crosses hidden creek dr, was cleaned and cleared of all debris and foliage from Hidden Creek Dr. to the frontage road on I-30. Also, it would be help greatly if the drop inlet pipes were enlarged at the intersection of Pine Meadow Dr. and Hidden Creek Dr. | Hidden Creek | Hurricane Creek | 0 | 0 1 | 1 | 0.0 0 | 0 0.0 | 0.0 2 | .1 1.0 | 2.5 1.2 |
| 387 | Joyce Koozer | | | | 4694715608 | 2805 Barbara Court Bryant, AR 72022 1104 N Richardson Place Dr. | Phone | | | -92.46030764 34.63946487 39 | East Ridge | Crooked Cree | k 0 | 0 0 | 0 | 0.0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 388 | Marian Langston | | | | 5018474218 | Bryant, AR 72022 1206 Kynlee Cv | Phone | | | -92.50254372 34.59881372 32 cul-de-sac looks like a pond when flooded; last rainstorm washed 0.50555000 24.5037500 4 | Richardson Place | Creek Hurricane | | | | | | | | 0.0 0.0 |
| 389 390 | Retta Patrick Richard Gentry | | Yard | | 5016532424 4798570160 | Bryant, AR 72022 2616 Carywood Dr. | Phone Phone | | | cul-de-sac looks like a pond when 1000ed; last rainstorm washed -92.50565919 34.62475852 1 -92.48779165 34.61864434 36 | Sunset Meadows/Gardens Carywood/Raintree Acres | Creek Crooked Cree | | | | | | | | 0.0 0.0 |
| 391 | Richard Gentry | | | | 5014160685 | Bryant, AR 72022 1203 Katrina Dr. Bryant, AR 72022 | Phone | | | -92.49657957 34.58428927 N/A | Pleasant Pointe/Cedarwood | Hurricane Creek | | | | | | | | 0.0 0.0 |
| 392 | Ron Abrahams | | | | 4798570160 | 2616 Carywood Dr. Bryant, AR 72022 | Phone | | | -92.48779165 34.61864434 36 | Carywood/Raintree Acres | | k 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 393 | Pam Gregory | | Yard | | 5018403018 | 22660 Hwy I-30 N Bryant, AR 72022 | Phone | | | house located at Country Woods Mobile Home Park: lot 43B; lot has flooded 3 times -92.50169321 34.61921033 N/A | Country Woods | Crooked Cree | k 0 | 0 0 | 0 | 0.0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 394 | Emilie Monk | emonk8@att.net | HouseBusiness | EveryMulti | 5019201717 | 1301 Boone Rd. Bryant, AR 72022 | Email | No | | Every time it rains yard floods. Water runs across street from Richardson Place. Cause flooding in both front and back yards. Flooding has also caused damage to house and sidewalk. Small ditch in backyard fills with liter carried from neighboring yards. | Boone Road | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | .0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 395 | Kermit Gray | | HouseBusiness | | 5015803356 | 704 Ruth Drive Bryant, AR 72022 | Phone | | | Damage to house and standing water in yard92.48455708 34.61001228 23 | Park Hill | Crooked Cree | k 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 396 | Lisa newburn | oliverll1@yahoo.com | HouseBusiness | EveryMulti | 5013131308 | 3905 mockingbird cove Benton AR | Email | No | Yes | Multiple times since 2017 but in May & oct 2019 flood water breached the building about 2 inches. The state replaced the drain pipes in 2020 but water was still breaching the property in all units 1-3 but this time not as bad with the latest remodation repairs -92.49024448 34.59138974 N/A complete this year costing about \$6000. I have lost 2 tenants to this issue of flooding in 2021 and 2022. This year purchased flood insurance even though I am not in a flood zone. | Outside City Limits | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | 0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 397 | Thomas Woodall | thomaswoodallsr@comcast.net | HouseBusiness | EveryMulti | 501 7721194 | 1613 Rodeo Dr | Email | Yes | Yes | When there is more then 1 inch of rain my yard, front and back floods, more then that the water will get up to my house. The stor water drains for the area into my back yard and there was never a plan to get the water out of our area. The sewer line for this area runs thru the drainage creek behind my house and it floods over the sewer system on a regular basis. | Rodeo Drive | Hurricane Creek | 0 | 0 0 | 1 | 0.0 0 | 0 0.0 | 0.0 2 | .3 0.9 | 2.8 1.1 |
| 398 | Rosa Reed | reed6611@yahoo.com | Yard | | 318-542-5389 | 1620 Pleasant Pointe Circle Bryant, AR 72202 | Mail | No | No | My back yard floods and hold standing water when it rains. It i really terrible during medium to heavy rain stores that are consistent for several days 34.59081068 N/A | Pleasant Pointe/Cedarwood | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 399 | Kathy Lewallen | jackielewallen@att.net | Yard | EveryMulti | 501-837-3369 | 307 NW 4th Street Bryant, Arkansas. 72022 | Email | No | | Water coming off the high school property House was built in 1937 and haven't had water issues until new building started. Water under house, flooded storage bldg, top scil washed away. 34.59769541 11 | Original Town | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | .0 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 400 | Chris perry | cperry.sds@gmail.com | HouseBusiness | EveryMulti | 870-405-7330 | 5915 Springdale road Alexander, AR 72002 | Email | No | Yes | since the subovision retiningtion Exaltates was built and beveloped in the forces water across Springdale road and my property in volumes .92.51937131 34.65649761 N/A .100 than what it was before. This is causing deterioration of my property. | Remington Place | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |
| 401 | Andrea Hooten | ahooten@aristotle.net | HouseBusiness | Every | 501-249-5562 | 12 Pine Chapel Drive | Email | No | Yes | Floods our carport every flash flood we have92.4986292 34.59646222 N/A | Tanglewood Acres | Hurricane Creek | | | | | | | | 0.0 0.0 |
| 402 | Courtney Ashbum Michael Sanders | Courtney.ashburn@yahoo.com thesandersfive21557@yahoo.com | Road Road | EveryMulti EveryMulti | 501-842-4004 501-944-4451 | 1113 Fox Chase Dr 3051 Mount McGregor Benton, AR 82019 | Email | No No | No Yes | Over flowing Ditch, floods road and in front of my house 92.49982969 34.58662367 N/A Every time it rains the north bound lane of Springhill floods causing dangerous travel conditions and hydroplaning. Drainage ditches need to clean, and roadside scraped of debris. I have lived off of Springhill for 11 years, and City has Natine nothing to address the issue. Just went thru this hazard today, 5/24 after raining. When there is torrential rain, conditions are even more severe. The flooding occurs between Hint and Baldwin drive. You can also see the homeowners gravel driveway washing in the street. | Bryant Meadows Springhill Road | Hurricane Creek Hurricane Creek | | 0 0 | | | | | | 0.3 0.9 |
| 407 | ANDREW CALDWELL | punkshoo_83@yahoo.com | Yard | EveryMulti | 7276887812 | 2316 Justus Loop | Phone | No | Yes | Recent water utility work in our area has caused a good bit of sx and rock build up in our gutter in the whole neighborhood. While the holes in the road did get patched no cleanup effort was made. The blockage is causing water to flow into yorks and down driveways. I have seem up to an inch of water outside my front door due to these issues | Springhill Manor | Hurricane Creek | 0 | 0 0 | 0 | 0.0 0 | 0.0 | 0.0 0 | .0 0.0 | 0.0 0.0 |

| | | | | | | | | | | Back yard storm water drains all across back and collects on left | | | | | | | | | | | | | |
|-----|--------------------|---------------------------------|---------------|------------|----------------|---|--------|-----|-----|---|----------------------------------|-----------------|---------------------------|--------------------|-----|---|---|-------|-----|---------|---------|-------|-----|
| 408 | Kenneth Redus Sr | kdbk0410@yahoo.com | Yard | EveryMulti | 501-352-0176 | 8303 Sapphire Dr Alexander, AR 72002 | Email | No | | side of yard facing the house flowing out towards the street. Get very soggy and water stands for long periods of time after it rains | -92.48893979 | 34.66501239 N/A | Stonehill/Stonegate | Owen Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 409 | Jared Butler | Jbutler1975@yahoo.com | HouseBusiness | EveryMulti | 5015803483 | 49 Neal Cove Bryant, AR 72022 | Email | No | Yes | April 11 and May 25, 2022 we have storm drain issues. Attacher are pictures from the hard rain in April. I woke up this morning to similar issues, a flooded basement. The storm drain in the cu-de sao in front of our house has very large cracks in it. This is causing the soil in and around our side of the street to flow downhill. | -92.48795066 | 34.61119719 N/A | Bryant Oaks | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0 0.0 | 0.0 |
| 410 | Renalta Brown | renaltabrown208@gmail.com | Yard | | 5016539192 | 208 South Walnut St 208 South Walnut St | Phone | No | Yes | downhill. The pipes under the street.My water pressure is weak. I live 1 mi away from Hill Farm Elem.& The Middle School on South Reynolds road.When either of the schools have drainage problems, the water bills around for people living around the school water bills get extremely expensiv | | 34.5922242 N/A | Original Town | Hurricane Creek | 0 | 0 | 1 | 1 0.0 | 0.0 | 0.0 0.0 | 0.9 0.5 | 5 0.9 | 0.6 |
| 411 | Angela Rogers | Mccloyen@gmail.com | Other | EveryMulti | 5019404444 | 2303 Defoe Circle Bryant AR 72022 | Mail | No | No | Our Subdivision has several water issues from fencing floating Back yards flooding. Loss of Electricity. Loss of Wi-Fi the water is a nuisance for our area | -92.47177551 | 34.61466789 22 | Cambridge Place | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 412 | Amyre Williams | amyrecollins@yahoo.com | Road | EveryMulti | (870) 821-0208 | 2117 Defoe Circle Bryant, Arkansas 72022 | Mail | Yes | No | In front of my house we literally have a pool of water that will sit their during a storm. It got so bad that my car was damage due to | -92.47189336 it. | 34.61355355 22 | Cambridge Place | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 413 | Jan Browning | janb0423@aol.com | Road | EveryMulti | 5017736872 | 305 Roya Lane Apt. 7 | Email | No | | There is a damaged storm drain at 305 Roya Lane. Specifically over the small creek that runs behind Bryant Brake and Tire and runs along the back of Bright Ideas and Sally Body Shop. The storm drain doesn't clear out and is hindered by limbs, leaves, trash, etc. When it backs up it floods the drivway into our apartment complex and over time, this has caused the cement to crack and fall away. | -92.50040197 | 34.61339001 N/A | Roya Lane | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |) 0.0 | 0.0 |
| 414 | Lezli Duke | lezli.duke76@gmail.com | Yard | EveryMulti | (501) 413-0118 | 2311 Defoe Circle Bryant, AR 72022 | Email | No | Yes | The streets flood when it rains, my back yard and side yard flood. And stays wet for days. The circles where the drains are you can drive through it for an hour or hours. Some neighbors front yards have small rivers going through them when it rains. I have one in the back yard when it rains. The yards stay wet for days. | -92.47177367 | 34.61486348 22 | Cambridge Place | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0 0.0 | 0.0 |
| 416 | Cheryl kendrick | Ckendrick86@comcast.net | Yard | EveryMulti | 5013501169 | 2217 Defoe circle | Phone | No | Yes | I have severe flooding in my back yard! I've sent pictures. This occurs several times per year. Water comes up to first step of my deck and entire back yard looks like a lake | -92.47158098 | 34.61407755 22 | Cambridge Place | Crooked Cree | k 1 | 1 | 2 | 2 2.1 | 1.1 | 2.3 1.3 | 2.7 1.6 | 3 2.9 | 1.7 |
| 417 | Charles Lucas | c.v.lucas00@gmail.com | Road | EveryMulti | 5015291914 | 2411 Defoe Bryant, AR | Phone | No | | Flash flooding often occurs during rainstorms in the lower lying area of the neighborhood. It make access to the Shobe entrance impassable at times | -92.47031442 | 34.6123328 22 | Cambridge Place | Crooked Cree | k 0 | 0 | 1 | 1 0.0 | 0.0 | 0.0 0.0 | 0.5 0.8 | 3 0.5 | 1.4 |
| 418 | Jack Moaelwy | Jackmoseley1956@yahoo.com | Yard | EveryMulti | 5014254046 | 1215 Woodland Park Road Bryant Ar. | Email | No | Yes | On the southwest corner of my property after a significant rain m property floods because of unnatural and diverted storm drainage | -92.51282496 | | Woodland Park | Hurricane Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 419 | Connie Murdock | wcajunconnie@sbcglobal.net | HouseBusiness | Every | 501-590-1284 | 72022 2212 Defoe Circle Bryant | Phone | No | | problems. Yards completely flooded with water FEET deep. Flowing like a river. Home across the street has flooder. | -92.47189838 | 34.61445953 22 | Cambridge Place | - | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 420 | Gail Taylor | gailbtaylor@yahoo.com | Yard | EveryMulti | 5019207116 | 1308 Pleasant Pointe Circle | Phone | No. | Yes | By backyard floods and backs up. It seems to be getting wors with each rain. I have a video I can send you - please let me know how/where to | -92 49718 | 34.58258 N/A | Pleasant Pointe/Cedarwood | Hurricane | 0 | 0 | 0 | 0 00 | 0.0 | 00 00 | 0.0 0.0 | 0 0.0 | 0.0 |
| 420 | Gall Taylor | galibiaylor@yanoo.com | rard | Everymulu | 5019207110 | 1306 Pleasant Pointe Circle | Prione | NO | res | send it. i know there is a natural spring that runs behind and between my | | 34.36256 N/A | Pleasant Pointe/Cedarwood | Creek | 0 | U | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 421 | Charlotte Paape | permpart@gmail.com | Other | EveryMulti | 501-258-0618 | 1503 Pleasant Pointe Circle Bryant, AR 72022 | Email | No | | The street in front of my house and the fourset on Kaltina Boods every the there is a heavy rain. Sometimes coming over the curbs and sidewalks into my front yard and neighbors on both sides of the street. Also, the back yard floods during these heavy rains. We have personally cleaned out the debris from the culvert area in the bac yard for years and that helps, but the problem appears to be fron where there is no where for the water to go in the back now for the homes at the entrance to Pleasant Pointe circle. Both front and back of properly is affected. Storage building in back has also been flooded. (Can't select more than 1 below so selected other.) | -92.49782881 e | 34.58173015 N/A | Pleasant Pointe/Cedarwood | Hurricane Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |) 0.0 | 0.0 |
| 422 | ANGIE L CARLOCK | angiecarlock@gmail.com | Yard | EveryMulti | 8706721215 | 2201 Greenleaf Drive Bryant, AR 72022 | Email | No | | I live at the end of Greenleaf Drive. There is a significant drainag issue in my yard (the worst is in the backyard), the woods behind my fence and a large portion of the park beside my house. There currently nowhere for this area to drain because there isn't anywhere in the area that is lower than these locations. | | 34.62370576 18 | Meadowlake | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |) 0.0 | 0.0 |
| 423 | sally keffer | keffersck@yahoo.com | HouseBusiness | Every | 8704568611 | 2209 DeFoe Circle Bryant, Ar. 72022 | Email | No | | Whenever it rains; not even a lot, it floods my backyard, and my house; it actually comes up in my house; it has washed sink hole in my neighbor to the north of me yard. It lears my flence down, if am not home; which is a good thing; as the water has to pour ou between my house and the neighbors house to drain into the stret to get out of our entire neighborhood. That drainage pip in my backyard is not sufficient enough to handle what comes down the hill behind me. And now that the large lot has been. Cleared for more development you can already see that the expected direction of drainage from that project will be even more waster into our backyards and into our homes. | s I t -92.47184399 t | 34.61401167 22 | Cambridge Place | Crooked Cree | k 0 | 0 | 1 | 1 0.0 | 0.0 | 0.0 0.0 | 1.8 0.7 | 7 2.1 | 0.8 |
| 424 | Donna Hanley | dnnhnly@yahoo.com | Yard | EveryMulti | 5019934510 | 1806 Briarwood Cove Bryant | Phone | No | Yes | A large from the street empties onto my property. Also water drair onto my property from 1802 and 1804. I have numerous pictures of my backyard flooding | -92.50313087 | 34.61170601 N/A | Edgewood | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 425 | Annetta Massanelli | annettamassanelli@sbcglobal.net | Yard | EveryMulti | 501-541-0789 | 416 Derek Court Alexander, AR 72002 Can get clearer pictures-these are fron a video | Email | No | Yes | I've been in my home for 10+ yrs. The rain runoff from my neighborhood has progressively worsened. I recently had an engineering company assess the situation and they advised that french drain across the N and W side of my house, including a catch basins at the NW comer and along the N drain path would be required to alleviate the excessive amount of storm water. Neighbors to the W and n N aved comspoust directed toward my property along with both lawns sloping toward my property as well feet confident that the terrain beyond my adjacent neighbors' property also directs storm runoff into mine. I have lots of erosion issues. I have added flower beds around my houes, as a barrier, keep the water at bay and from, hopefully, adversely affecting my home's foundation. My garage side door and it's frame has recently been replaced due to water drainage and rot via flooding I would gladly welcome any help I can get to eliminate this perpetual rain water issue I have at my home. | -92.49051904 0 | 34.63655182 N/A | Meadowridge | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 426 | Verma Dalrymple | | Yard | EveryMulti | 5017470204 | 724 Elkhart | Phone | No | No | During rain events, water will cross yard to where they cannot access utility house where mower, shop vac are kept. Low area or yard cannot be mowed much of year. In 5 years of living there, water has gotten in the house 1 time. Sometimes water will get o patio. Next door neighbor Peterson has taken photos of the flooding. | 02 406027 | 34.5855435 N/A | Bryant Meadows | Hurricane Creek | 1 | 1 | 1 | 1 1.2 | 0.5 | 1.4 0.6 | 1.8 0.7 | 7 1.9 | 0.8 |
| 427 | Debbie Fannin | | Yard | EveryMulti | 5013663111 | 1723 Kensington Drive | Phone | No | No | When they built house, did not put culvert in cul-de-sac, but it looks like there should have been one there. House is on slant, and flooding has caused exposed pipes and trees to lean toware neighbors. Water has not gotten in the house. Lot receives lots of runoff from area, more than neighbors. Fence has fallen. Paid for landscaper to put in rock creek to flow into a ditch, but afraid this will cause flooding on other neighbors. | -92.50813374 | 34.62771488 6 | Forest Cove | Hurricane Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 428 | CJ Thomas | | Yard | EveryMulti | 5014633132 | 1003 Sunset Gardens | Phone | No | | Based on phone call, water comes from the Plaza and leaves the plaza at the northwest corner and ponds behind her yard and he two neighbors yards to the north. It gets fairly deep in her back hard and has come all the way up to her deck. | -02 50423753 | 34.62306345 6 | Sunset Meadows/Gardens | Hurricane Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |) 0.0 | 0.0 |
| 429 | Patricia Louks | | Yard | | 5018470220 | 1008 S. Richardson Place | Phone | No | No | Ditch next to house floods often. Not cleaned out by others. Oa tree in yard was eroded and roots exposed - cut tree, but afraid w lose this area of land if it falls into channel. Channel has been du out in the past but grown up down the road. Water has not gotter in house but most of yard floods, cannot get to utility house when floods. | -92.50106213 it | | Richardson Place | Hurricane Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 430 | Justin Hill | justin_hll@yahoo.com | Yard | EveryMulti | 5019432799 | 603 mills park road Bryant AR 72022 | Phone | No | Yes | I dug trenches to try and divert the water so more goes into the drain/ditch but I can't get it righ | | 34.60008698 35 | Bloomfield Hills | Crooked Cree | k 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 | 0.0 | 0.0 |
| 431 | Marian Langston | | Yard | EveryMulti | 5018474218 | 1104 N Richardson Place | Phone | No | | Per phone call, the water comes across the backyards from the west and a significant amount of water unshes across her backyar and erodes the dirt and has exposed the foundation of her patio. She can not tell where exactly the water is coming from, she think it is just coming across everyones backyards. | -92.50254372 | 34.59881372 32 | Richardson Place | Hurricane Creek | 0 | 0 | 0 | 0 0.0 | 0.0 | 0.0 0.0 | 0.0 0.0 |) 0.0 | 0.0 |

| 432 | 2 Joyce Koozer | | Yard | EveryMulti | 4694715608 | 2805 Barbara Ct | Phone | No | Per phone call, water comes from the field NW of her house an infloods her backyard and her two neighbors to the south backyard of the south backyard of the two neighbors to the south backyard of the south backyard of the two neighbors to the south backyard of the south backyard |
|-----|-------------------|--------------------------|---------------|------------|--------------|--|-------|----|--|
| 433 | 3 Richard Gentry | | Yard | EveryMulti | 5014160685 | 1203 Katrina Dr | Phone | No | Per phone call, there are underground springs coming into his backyard as well as health of the street down the driveway that keep his backyard and his neighbors backyard and his neighbors backyard and his neighbors backyard behind him covered in water frequently. The driveway looks as though it could be modified to prevent water from exiting the street. |
| 434 | 4 Joe Fast | accu-01@sbcglobal.net | Road | EveryMulti | 870-917-8047 | 105 SW 4th Street Bryant, AR 72022 | Phone | No | I have dates of flooding on pictures, it is several times a year. The diltches are not deep enough and are not kept cleaned out. The culvert on Reynolds Road before the church backs up because of poor installation of the culvert. SW 4h street at Reynolds Road floods. Have had flood water in building facing Reynolds Road floods. Have had flood water in building can several occasions. Road floods a couple blocks down by apartments. If the photos do not come thru with this form please let me know, I will print them or email them separately. |
| 435 | 5 Glenda Royal | glroyal@sbcglobal.net | Yard | EveryMulti | 5015299775 | 1101 Sunset Gardens East | Phone | No | -92.50460927 34.62269557 6 Sunset Meadows/Gardens Hurricane 0 0 0 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 |
| 436 | 6 Glenda Royal | glroyal@sbcglobal.net | Yard | EveryMulti | 5015299775 | 1101 Sunset Gardens East Bryant, AR 72022 | Phone | No | Back Yard stays very wet almost continually -92.50461 34.6227 6 Sunset Meadows/Gardens Hurricane 0 0 0 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 |
| 437 | 7 Duane Purtell | | HouseBusiness | Every2 | 9134888656 | 12939 S Constance St Olathe, KS 66062 | Email | No | The city of Bryant is dumping street and drainage ditch water from Robinbood Dring and Springhill Rd into a pond on our property at 2702 Springhill Rd. We have an issue with beavers building dams blocking the pond overflow. In the past 5 years, we have spent approximately \$8,000 to trap the beavers and have had to consistently remove the beaver dams. We are concerned that if the beavers are left alione, the houses bordering the pond will flood. The city has even installed and enlarged a culvert under Robinbood Dr into the pond on our property in addition to the vale of Robinbood Dr into the pond on our property in addition to the vale from the drainage ditch on the south side of Robinbood Dr. |
| 438 | 8 Robert E Roedel | roblovesbryant@gmail.com | HouseBusiness | Every2 | 5019442220 | 204 Richwood Drive | Email | No | Homes along Boone Road between Reynolds Road and Tankewood 1 -92.49131412 34.59608616 11 Original Town Hurricane 0 0 0 0 0 0 0.0 0.0 0.0 0.0 0.0 0.0 0. |



Appendix B

Flood insurance policy data and repetitive loss data for the City of Bryant was acquired from the State NFIP Office. Insurance policy information is listed, followed by repetitive loss data.

| Insurance Provider | Parameters | Grand Total | BRYANT, CITY OF |
|----------------------|------------------------|------------------|--------------------|
| | | | (050308) |
| Grand Total | Policy Count | 67 | 67 |
| | Contract Count | 67 | 67 |
| | Premium + FPF | \$43,091 | \$43,091 |
| | Building Coverage | \$14,050,70 0 | \$14,050,700 |
| | Contents Coverage | \$4,276,000 | \$4,276,000 |
| | Avg. Building Coverage | \$209,712 | \$209,712 |
| | Avg. Contents Coverage | \$77,745 | \$77,745 |
| Allstate Insurance | Policy Count | 8 | 8 |
| Company (19232) | Contract Count | 8 | 8 |
| | Premium + FPF | \$3,832 | \$3,832 |
| | Building Coverage | \$1,650,000 | \$1,650,000 |
| | Contents Coverage | \$620,000 | \$620,000 |
| | Avg. Building Coverage | \$206,250 | \$206,250 |
| | Avg. Contents Coverage | \$88,571 | \$88,571 |
| American National | Policy Count | 1 | 1 |
| Property & Casualty | Contract Count | 1 | 1 |
| Company (28401) | Premium + FPF | \$467 | \$467 |
| | Building Coverage | \$250,000 | \$250,000 |
| | Contents Coverage | \$100,000 | \$100,000 |
| | Avg. Building Coverage | \$250,000 | \$250,000 |
| | Avg. Contents Coverage | \$100,000 | \$100,000 |
| Assurant, DBA: | Policy Count | 17 | 17 |
| American Bankers | Contract Count | 17 | 17 |
| Insurance Company of | Premium + FPF | \$8,944 | \$8,944 |
| Florida (10111) | Building Coverage | \$3,502,000 | \$3,502,000 |
| | Contents Coverage | \$758,000 | \$758,000 |





| | Avg. Building Coverage | \$206,000 | \$206,000 |
|-------------------------|------------------------|-----------|-----------|
| | Avg. Contents Coverage | \$63,167 | \$63,167 |
| | | | |
| | | | |
| Auto-Owners | Policy Count | 2 | 2 |
| Insurance Company | Contract Count | 2 | 2 |
| (18988) | Premium + FPF | \$1,224 | \$1,224 |
| | Building Coverage | \$500,000 | \$500,000 |
| | Contents Coverage | \$200,000 | \$200,000 |
| | Avg. Building Coverage | \$250,000 | \$250,000 |
| | Avg. Contents Coverage | \$100,000 | \$100,000 |
| Farmers Insurance | Policy Count | 5 | 5 |
| Group, DBA: Fire | Contract Count | 5 | 5 |
| Insurance Exchange | Premium + FPF | \$3,823 | \$3,823 |
| (21660) | Building Coverage | \$887,400 | \$887,400 |
| | Contents Coverage | \$214,000 | \$214,000 |
| | Avg. Building Coverage | \$177,480 | \$177,480 |
| | Avg. Contents Coverage | \$71,333 | \$71,333 |
| Hartford Fire Insurance | Policy Count | 1 | 1 |
| Company (19682) | Contract Count | 1 | 1 |
| | Premium + FPF | \$2,922 | \$2,922 |
| | Building Coverage | \$500,000 | \$500,000 |
| | Contents Coverage | \$0 | \$0 |
| | Avg. Building Coverage | \$500,000 | \$500,000 |
| | Avg. Contents Coverage | | |
| Hartford Underwriters | Policy Count | 2 | 2 |
| Insurance Company | Contract Count | 2 | 2 |
| (30104) | Premium + FPF | \$905 | \$905 |
| | Building Coverage | \$400,000 | \$400,000 |
| | Contents Coverage | \$160,000 | \$160,000 |
| | Avg. Building Coverage | \$200,000 | \$200,000 |
| | Avg. Contents Coverage | \$80,000 | \$80,000 |
| Homesite Insurance | Policy Count | 1 | 1 |
| Company (17221) | Contract Count | 1 | 1 |
| | Premium + FPF | \$780 | \$780 |





| | Building Coverage | \$200,000 | \$200,000 |
|------------------------|------------------------|-------------|-------------|
| | Contents Coverage | \$80,000 | \$80,000 |
| | Avg. Building Coverage | \$200,000 | \$200,000 |
| | Avg. Contents Coverage | \$80,000 | \$80,000 |
| Liberty Mutual Fire | Policy Count | 2 | 2 |
| Insurance Company | Contract Count | 2 | 2 |
| (23035) | Premium + FPF | \$1,094 | \$1,094 |
| | Building Coverage | \$400,000 | \$400,000 |
| | Contents Coverage | \$160,000 | \$160,000 |
| | Avg. Building Coverage | \$200,000 | \$200,000 |
| | Avg. Contents Coverage | \$80,000 | \$80,000 |
| National General | Policy Count | 2 | 2 |
| Insurance Company | Contract Count | 2 | 2 |
| (23728) | Premium + FPF | \$1,170 | \$1,170 |
| | Building Coverage | \$450,000 | \$450,000 |
| | Contents Coverage | \$180,000 | \$180,000 |
| | Avg. Building Coverage | \$225,000 | \$225,000 |
| | Avg. Contents Coverage | \$90,000 | \$90,000 |
| NFIP Direct Servicing | Policy Count | 8 | 8 |
| Agent (99999) | Contract Count | 8 | 8 |
| | Premium + FPF | \$4,261 | \$4,261 |
| | Building Coverage | \$1,523,300 | \$1,523,300 |
| | Contents Coverage | \$520,000 | \$520,000 |
| | Avg. Building Coverage | \$190,413 | \$190,413 |
| | Avg. Contents Coverage | \$74,286 | \$74,286 |
| Occidental Fire and | Policy Count | 1 | 1 |
| Casualty Company of | Contract Count | 1 | 1 |
| North Carolina (23248) | Premium + FPF | \$463 | \$463 |
| | Building Coverage | \$200,000 | \$200,000 |
| | Contents Coverage | \$80,000 | \$80,000 |
| | Avg. Building Coverage | \$200,000 | \$200,000 |
| | Avg. Contents Coverage | \$80,000 | \$80,000 |
| Philadelphia Indemnity | Policy Count | 1 | 1 |
| Insurance Company | Contract Count | 1 | 1 |
| (18058) | Premium + FPF | \$2,033 | \$2,033 |





| | Building Coverage | \$500,000 | \$500,000 | | |
|-----------------------|------------------------|-------------|-------------|--|--|
| | Contents Coverage | \$50,000 | \$50,000 | | |
| | Avg. Building Coverage | \$500,000 | \$500,000 | | |
| | Avg. Contents Coverage | \$50,000 | \$50,000 | | |
| Southern Farm Bureau | Policy Count | 8 | 8 | | |
| Casualty Insurance | Contract Count | 8 | 8 | | |
| Company (18325) | Premium + FPF | \$5,869 | \$5,869 | | |
| | Building Coverage | \$1,388,000 | \$1,388,000 | | |
| | Contents Coverage | \$474,000 | \$474,000 | | |
| | Avg. Building Coverage | \$173,500 | \$173,500 | | |
| | Avg. Contents Coverage | \$79,000 | \$79,000 | | |
| USAA General | Policy Count | 6 | 6 | | |
| Indemnity Company | Contract Count | 6 | 6 | | |
| (02003) | Premium + FPF | \$4,197 | \$4,197 | | |
| | Building Coverage | \$1,325,000 | \$1,325,000 | | |
| | Contents Coverage | \$530,000 | \$530,000 | | |
| | Avg. Building Coverage | \$220,833 | \$220,833 | | |
| | Avg. Contents Coverage | \$88,333 | \$88,333 | | |
| Westfield Insurance | Policy Count | 1 | 1 | | |
| Company (24112) | Contract Count | 1 | 1 | | |
| | Premium + FPF | \$375 | \$375 | | |
| | Building Coverage | \$125,000 | \$125,000 | | |
| | Contents Coverage | \$50,000 | \$50,000 | | |
| | Avg. Building Coverage | \$125,000 | \$125,000 | | |
| | Avg. Contents Coverage | \$50,000 | \$50,000 | | |
| Wright National Flood | Policy Count | 1 | 1 | | |
| Insurance Company | Contract Count | 1 | 1 | | |
| (11523) | Premium + FPF | \$732 | \$732 | | |
| | Building Coverage | \$250,000 | \$250,000 | | |
| | Contents Coverage | \$100,000 | \$100,000 | | |
| | Avg. Building Coverage | \$250,000 | \$250,000 | | |
| | Avg. Contents Coverage | \$100,000 | \$100,000 | | |



| IC | NFIP Insured | Address | Date Of Loss 1 | Occupancy | Currently Mapped Flood Zone | Building Payment 1 | Contents Payment 1 | Building Value | Date Of Loss 2 | Building Payment 2 | Contents Payment 2 | Date Of Loss 3 | Building Payment 3 | Contents Payment 3 | Date Of Loss 4 | Building Payment 4 | Cumulative Building Payment | Cumulative Contents Payment | Total Losses | Total Paid | Average Paid |
|----|-----------------|--------------------|-------------------|-------------|-----------------------------------|-----------------------|-----------------------|----------------|-------------------|-----------------------|--------------------|-------------------|-----------------------|-----------------------|-------------------|-----------------------|-----------------------------------|-----------------------------------|-----------------|---------------|--------------|
| 1 | NO | 2617 HENSON PL | 1/23/2020 | SINGLE FMLY | Х | \$ 13,400.77 | \$ 19,608.44 | \$ 164,882.00 | 4/22/2018 | \$ 29,368.86 | \$27,047.17 | 4/3/2008 | \$ 38,860.71 | \$ 13,114.47 | 4/29/2006 | \$ 10,337.31 | \$ 91,967.65 | \$ 59,770.08 | 4 | \$ 151,737.73 | \$ 37,934.43 |
| 2 | NO | 1302 KENSINGTON DR | 4/29/2017 | SINGLE FMLY | | \$ 13,604.01 | \$ - | \$ 248,473.00 | 4/4/2008 | \$ 15,567.65 | \$ - | | | | | | \$ 29,171.66 | \$ - | 2 | \$ 29,171.66 | \$ 14,585.83 |
| 3 | YES | 1703 RODEO DR | 5/18/2021 | SINGLE FMLY | X | \$ 20,565.90 | \$ 62.14 | \$ 485,674.00 | 4/18/2019 | \$ 31,907.26 | \$ 20.96 | | | | | | \$ 52,473.16 | \$ 83.10 | 2 | \$ 52,556.26 | \$ 26,278.13 |
| 4 | NO | 2616 HENSON PL | 5/18/2021 | SINGLE FMLY | X | \$ 20,809.90 | \$ - | \$ 249,224.00 | 4/30/2017 | \$ 10,412.86 | \$ 7,071.59 | | | | | | \$ 31,222.76 | \$ 7,071.59 | 2 | \$ 38,294.35 | \$ 19,147.18 |



Appendix C

The City of Bryant currently has 35 Letters of Map Amendments. They are listed below.

| Case Number | Street Address | Outcome - What is removed from SFHA | Flood Zone | 1% Annual Chance Flood Elev | Lowest Adjacent Grade Elev | Lowest Lot Elev |
|-----------------|------------------------------------|---|-----------------|---|-------------------------------------|-----------------------|
| 22-06- 0450A | 3001 Creekside Dr. | Property | X (shaded) | - | - | 330.3 |
| 22-06- 3699A | 2331 Abigail Dr. | Structure | X (unshaded) | - | 441.9 | - |
| 22-06- 1241A | 6133 Creekside Dr. | Property | X (shaded) | - | - | 330.4 |
| 22-06- 2782A | 1805 Boone Rd. | Structure (Residence) | AE | 357.3 | 355.7 | - |
| 03-06- 1589A | 312 Fair Oaks Dr. | Structure | X (unshaded) | 379.5 | 381.5 | - |
| 03-06- 2164A | 1101 South Richardson Place Dr. | Structure | A | 375.2 | 375.5 | - |
| 04-06- 1646A | 201 Fair Oaks Dr. | Structure | X (unshaded) | 374.6 | 375.5 | - |
| 04-06-480X | 1101 South Richardson Place Dr. | Structure | X (unshaded) | 374.6 | 375.5 | |
| 11-06- 0025A | 1301 Boone Rd. | Property | X (unshaded) | 365 | 378.6 | 365.1 |
| 12-06- 3701A | 2109 Defoe Circle | Structure | X (unshaded) | - | 349.5 | - |
| 12-06- 4143A | 5409 Glenn Cove | Structure | AE | - | 362.7 | - |





| Case Number | Street Address | Outcome - What is removed from SFHA | Flood Zone | 1% Annual Chance Flood Elev | Lowest Adjacent Grade Elev | Lowest Lot Elev |
|-----------------|---|---|-----------------|---|-------------------------------------|-----------------------|
| 13-06- 1295A | Lot 62, Kings Crossing | Structure | X (unshaded) | 346.2 | 348.8 | - |
| 13-06- 1437A | 2202 Ridgecrest Dr. | Structure (Residence) | AE | 373.2 | 371.3 | - |
| 13-06- 1893A | 100 Medinah Blvd. | Structure (Building 1) | X (unshaded) | 361 | 362 | - |
| 13-06- 3085A | 600 Par Dr. | Structure (Building 1) | X (shaded) | - | 368.6 | - |
| 14-06- 0513A | 803 Mills Park Road | Structure | X (unshaded) | - | 378.3 | - |
| 14-06- 4256A | 1008 Hazelwood Circle | Structure (Residence) | X (unshaded) | - | 378.6 | - |
| 15-06- 0063A | 1805 Boone Rd. | Structure (Residence) | X (shaded) | - | 355.7 | - |
| 15-06- 1282A | Lots 19, 20, 21, 70, 75, 76, 77 and 78, Oak Glenn Subdivision | Portion of Property | X (shaded) | - | - | 366.5 |
| 15-06- 1283A | Lots 28-32, The crossing at Oak Hill | Property | X (shaded) | 366.9 | - | 367.5 |
| 15-06- 1362A | 1014 North Richardson Place | Structure | X (unshaded) | - | 382.2 | - |
| 16-06- 0950A | 2119 Byron Dr. | Structure (Residence) | X (unshaded) | | | - |
| 16-06- 2592A | 204 Crossing Place | Structure | X (shaded) | - | 369.3 | - |
| 16-06- 3583A | 5354 Buckingham Place | Structure | X (unshaded) | - | 352.4 | - |





| Case Number | Street Address | Outcome - What is removed from SFHA | Flood Zone | 1% Annual Chance Flood Elev | Lowest Adjacent Grade Elev | Lowest Lot Elev |
|-----------------|--|---|-----------------|---|-------------------------------------|-----------------------|
| 17-06- 0060A | 14 Eastwood Dr. | Structure | X (shaded) | - | 352.7 | - |
| 17-06- 0900A | 2514 Ridgecrest Dr. | Structure (Residence) | X (unshaded) | - | 386.6 | - |
| 17-06- 3332A | 1109 Boone Road | Structure | X (unshaded) | - | 370.8 | - |
| 17-06- 4286A | 5334 Buckingham Place | Structure (Residence) | X (shaded) | - | 350.1 | - |
| 19-06- 2159A | 5409 Glenn Cove | Structure | X (shaded) | - | 364.2 | - |
| 19-06- 3179A | 1102 Oak Glenn Loop | Structure (Residence) | X (shaded) | - | 363.5 | - |
| 20-06- 0848A | 1002 South Richardson Place | Structure | X (unshaded) | - | 377.1 | - |
| 98-06- 1118A | Lots 1-4, Cambridge Place Subdivision | Structure | А | - | - | - |
| 99-06- 1947A | 304 Fair Oaks Dr. | Structure | X (unshaded) | 379.6 | 389.4 | - |
| 99-06- 2083A | 1013 S. Richardson Place Dr. | Structure | X (unshaded) | 373 | 374 | - |
| 99-06-247A | Lot 34, Richardson Place | Structure | А | - | - | - |





Appendix D

Roadway functional classification data was taken from ARDOT and listed below.

| Route Type | Cross Drain Design Event | Storm Drain/Side Drain/Pavement Drainage Design Event |
|---------------------|-----------------------------|--|
| Interstate Projects | 50-year | 50-year |
| Principal Arterials | 50-year | 10-year |
| Minor Arterials | 50-year | 10-year |
| Major Collectors | 25-year | 10-year |
| Minor Collectors | 25-year | 10-year |
| Local Highways | 10-year | 2-year |

| Street Name | Functional Class |
|--------------------|------------------|
| I-30E/I-30W | Interstate |
| Highway 183 | Minor Arterial |
| Highway 5 | Minor Arterial |
| Boone Road | Minor Arterial |
| Mills Park Road | Minor Arterial |
| Springhill Road | Minor Arterial |
| Alcoa Road | Minor Arterial |
| Alcoa Overpass | Minor Arterial |
| Hilldale Road | Minor Arterial |
| Midland Road | Minor Arterial |
| S. Shobe Road | Minor Arterial |
| Wilkerson Road | Minor Arterial |
| Cynamide Road | Minor Arterial |
| Springhill Road | Minor Arterial |
| Anderson Lake Road | Major Collector |
| Bishop Road | Major Collector |
| Boswell Road | Major Collector |
| Brookwood Road | Major Collector |
| Carmichael Road | Major Collector |
| Carrie Drive | Major Collector |
| Cedar Driver | Major Collector |
| Commonwealth Drive | Major Collector |





| Street Name | Functional Class |
|---------------------------|------------------|
| Debswood Drive | Major Collector |
| Elaine Place | Major Collector |
| Evans Loop Road | Major Collector |
| Hickory Drive | Major Collector |
| Hilltop Road | Major Collector |
| Hurricane Lake Road | Major Collector |
| Indian Springs Drive | Major Collector |
| Johnswood Road | Major Collector |
| Lexington Avenue | Major Collector |
| Lombard Road | Major Collector |
| Lora Drive | Major Collector |
| Miller Road | Major Collector |
| Mills Park Road | Major Collector |
| Neal Street | Major Collector |
| Northlake Road | Major Collector |
| N. Prickett Road | Major Collector |
| N. Shobe Road | Major Collector |
| NW 4 th Street | Major Collector |
| Park Road | Major Collector |
| Pine Drive | Major Collector |
| Prange Road | Major Collector |
| Prickett Road | Major Collector |
| Raymar Road | Major Collector |
| Ridgecrest Drive | Major Collector |
| Ruth Drive | Major Collector |
| Snow Lane | Major Collector |
| Springdale Road | Major Collector |
| Springhill Road | Major Collector |
| S. Shobe Road | Major Collector |
| S. Spruce Street | Major Collector |
| SW 3 rd Street | Major Collector |
| SW 4 th Street | Major Collector |
| Wildwood Road | Major Collector |
| W. Meadowbrook Street | Major Collector |
| Woodland Drive | Major Collector |





| Street Name | Functional Class |
|--------------------|------------------|
| Woodland Park Road | Major Collector |
| Zuber Road | Major Collector |

\\\





| | Project Prioritization and Opinion of Project Cost Summary | | | | | | | |
|--|--|---|-----------------|----|--------------------------------|----|---------------|--|
| ³ Project Prioritization | Project Name | t Name 1 Flooding 2 Floodin | | 1 | otal Estimated Project Cost | | | |
| 3 | Boone Road at Boswell Creek Improvements | Moderate | < 3 Years | \$ | 409,204.00 | \$ | 532,000.00 | |
| 1 | Hidden Forest Subdivision Improvements | Minor | 6 - 25 Years | \$ | 863,399.00 | \$ | 1,122,400.00 | |
| 3 | Hidden Creek Drive at Shoal Creek Improvements | Major | < 3 Years | \$ | 1,522,373.00 | \$ | 1,979,100.00 | |
| 1 | Meadow Lake Subdivision Improvements | Minor | 1 - 5 Years | \$ | 2,077,058.00 | \$ | 2,700,200.00 | |
| 3 | Hilldale Road at Owen Creek Improvements | Moderate | < 3 Years | \$ | 2,451,455.00 | \$ | 3,186,900.00 | |
| 2 | Lea Circle near Hurricane Creek | Moderate | 3 - 7 Years | \$ | - | \$ | 3,697,700.00 | |
| 3 | Oak Glenn Subdivision Improvements | Major | < 5 Years | \$ | 2,865,615.00 | \$ | 3,770,000.00 | |
| 2 | Midland Road at Owen Creek Improvements | Moderate | 3 - 7 Years | \$ | 4,686,374.00 | \$ | 6,092,300.00 | |
| 2 | Shobe Road at Unnamed Tributary to Crooked Creek Improvements | Moderate | 3 - 7 Years | \$ | 10,809,380.00 | \$ | 14,052,200.00 | |
| 3 | Cynamide Road at Hurricane Creek Improvements | Major | < 5 Years | \$ | 12,394,577.00 | \$ | 16,113,000.00 | |
| 3 | Rodeo Drive at Shoal Creek Improvements | Major | < 5 Years | \$ | 13,441,794.00 | \$ | 17,474,300.00 | |
| 3 | Boone Road at Hurricane Creek Improvements | Major | < 5 Years | \$ | 19,000,526.00 | \$ | 24,700,700.00 | |
| 1 | Millspark & Ruth Drive Drainage Improvements | Minor | 1 - 5 Years | \$ | 125,000.00 | \$ | 143,000.00 | |
| 1 | Walmart Basin City Owned | Minor | 1 - 5 Years | \$ | 200,000.00 | \$ | 230,000.00 | |
| 1 | Vicki Drive Drainage Improvements | Minor | 1 - 5 Years | \$ | 175,000.00 | \$ | 201,250.00 | |
| 2 | Pleasant Pointe Subdivision Drainage Improvements | Moderate | < 5 Years | \$ | 1,100,000.00 | \$ | 1,180,000.00 | |
| 1 | Sunset Meadows Subdivision Drainage Improvements | Minor | 6 - 25 Years | \$ | 1,500,000.00 | \$ | 1,620,000.00 | |
| 2 | Springhill Road Crossing Improvements | Moderate | < 5 Years | \$ | 50,000.00 | \$ | 57,500.00 | |
| 1 | 6141 Remington Subdivision | Minor | 8-25 Years | \$ | 175,000.00 | \$ | 201,250.00 | |
| 1 | Stivers Drainage Improvements | Minor | < 5 Years | \$ | 300,000.00 | \$ | 380,000.00 | |
| 1 | Lacross Drainage Improvements | Minor | < 5 Years | \$ | 70,000.00 | \$ | 120,000.00 | |
| 3 | Walmart Super Center Subdivison Drainage Improvements (Failing and Collapsed Drainage System) | Minor | No Rating | \$ | 3,000,000.00 | \$ | 3,450,000.00 | |

 $^{^{\}rm 1}$ Definitions for Major, Moderate and Minor flooding impacts are as follows:

- a. Major (at least one of the following):
 - i. Damage to structures or homes
 - ii. Significantly impedes traffic flow on a collector, minor arterial, or major arterial
 - iii. Prevents access to a residence or business
- b. Moderate (at least one of the following):
 - i. Damage to property other than structures or homes (i.e. erosion, fences, etc.)



- ii. Significantly impedes traffic flow on a local road
- c. Minor (at least one of the following):
 - i. Nuisance flooding such as standing water or ponding caused by inadequate stormwater infrastructure within Public Right-of-Way.
 - ii. Does not meet city's drainage criteria but does not impede traffic flow
- ² A rough estimate of the frequency of the flooding targeted by the project can be obtained by one of the following ways:
 - i. Engineering Judgement and knowledge of the flooding issue within the city.
 - ii. Referring to previous drainage studies
- ³ See attached Drainage Project Scoring Matrix.

| D | Drainage Scoring Matrix | | | | | | | |
|-------------------|-------------------------|-------|--|--|--|--|--|--|
| Flooding Severity | Flooding Frequency | Score | | | | | | |
| Major | < 5 Years | 2 | | | | | | |
| Moderate | < 3 Years | 3 | | | | | | |
| | | | | | | | | |
| Major | 5 - 10 Years | | | | | | | |
| Moderate | 3 - 7 Years | 2 | | | | | | |
| Minor | < 1 Year | | | | | | | |
| | | | | | | | | |
| Major | 11 - 25 Years | | | | | | | |
| Moderate | 8 - 25 Years | 1 | | | | | | |
| Minor | 1 - 5 Years | 1 | | | | | | |
| Minor | 6 - 25 Years | | | | | | | |

Comprehensive Drainage Master Plan City of Bryant

Phase 2 Report

Prepared by:



4701 Northshore Drive North Little Rock, Arkansas 72118

January 2025

Garver Project No.: 20T20090



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Appendices

Appendix A: Boone Road at Hurricane Creek Improvements

Appendix B: Boone Road at Boswell Creek Improvements

Appendix C: Cynamide Road at Hurricane Creek Improvements

Appendix D: Hidden Forest Subdivision Improvements

Appendix E: Meadow Lake Subdivision Improvements

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1.0 Overall Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- Identify current and future drainage problems;
- · Generate proposed solutions to identified problems;
- · Develop a Capital Improvement Plan (CIP); and
- Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

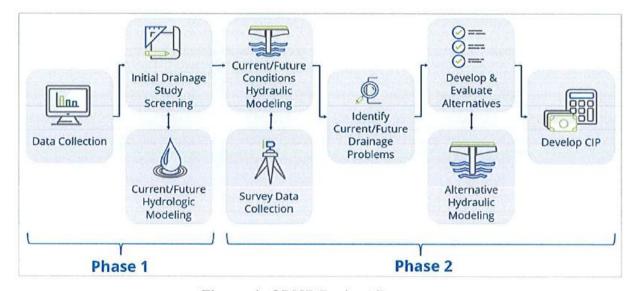


Figure 1. CDMP Project Process

This report discusses the processes and findings of Phase 2.





2.0 Phase 2 Overview

Phase 1 was completed and submitted to the City in 2023. At the end of Phase 1, Garver met with the City to discuss the identified potential problem areas and select locations for detailed study in Phase 2. These problem areas were listed in the Phase 1 report. Along with these identified problem areas, Garver provided a list of recommended hydraulic models for Phase 2. This list is shown below in Table 1. During the Phase 2 process, some additions and removals were made based on discussions with the City. These are noted in the table.

Table 1. Recommended Hydraulic Models for Phase 2

| Stream/ Location | Model Extents | Model Type | Project Location | Phase 2 Updates |
|--|---|---|--|--|
| Shoal Creek | Confluence with Hurricane Creek up to Kensington Drive | 1D HEC-RAS | Forest Cove/ Hidden Forest Drive/ Rodeo Drive | Model substantially complete; LOMR to be completed following addition of City project work |
| Shoal Creek Tributary (previously called Unnamed Tributary) | Confluence with Shoal Creek up to Kensington Drive | 1D HEC-RAS | Sherwood Estates/ Northridge Ph 2/Forest Cove/Springhi Il Manor | Model substantially complete; LOMR to be completed following addition of City project work |
| Hurricane Creek | Highway 183 to Hurricane Lake | 1D and 2D HEC-RAS (Boone Road portion performed during Phase 1) | Boone Road/ Cynamide Road | N/A |
| Boswell Creek | Confluence with Hurricane Creek to Boswell Road | 1D HEC-RAS | Boone Road | Richardson Place removed as problem location to be analyzed |





| Stream/ Location | Model Extents | Model Type | Project Location | Phase 2 Updates |
|---|--|--|--------------------------------|--|
| Meadowlake Subdivision | Meadowlake neighborhood | XPSWMM | Whole neighborhood | N/A |
| Unnamed Tributary to Crooked Creek | Confluence with Crooked Creek to southwest corner of Meadowlake neighborhood | 1D HEC-RAS | Shobe Road | N/A |
| Owen Creek | Confluence with Fourche Creek to 1,000 ft upstream of Hilldale Road (East-West) | 1D HEC-RAS | Hilldale Road/ Midland Road | N/A |
| Owen Creek Tributary and Tributary A | Confluence with Owen Creek to upstream of Roman Heights Ave; Lombard Road | 1D HEC- RAS (downstream reach performed in Phase 1) | Oak Glenn Neighborhood | Model extended; City decided to remove study of Oak Meadows/Roman Heights/Dawson Pointe; potential additional study of Oak Glenn discussed |
| Hidden Forest Subdivision | Hidden Forest neighborhood | XPSWMM | Whole neighborhood | Neighborhood added to list by City following Phase 1 report |

3.0 Phase 2 Study Locations

The project study areas for Phase 2 are described in detail in separate reports included in the appendices to the Phase 2 report. A description of each is given below.





Table 2. List of Problem Locations and Solutions

| Appendix | Problem Location | Conceptual Solution |
|----------|---|--|
| Α | Boone Road at Hurricane Creek | Lengthen Hurricane Creek bridge; add relief culvert to west; raise roadway |
| В | Boone Road at Boswell Creek | Upsize culverts at Hurricane Creek; improve channel in vicinity of Boone Road |
| c | Cynamide Road at Hurricane Creek | Replace culverts with longer bridge; raise roadway |
| D | Hidden Forest Subdivision | Improve ditches; increase storm pipe capacity |
| E | Meadowlake Subdivision | Improve ditches; increase storm pipe capacity |
| F | Midland and Hilldale Roads at Owen Creek | Lengthen bridges; raise roadways |
| G | Hidden Creek Drive and Rodeo Drive at Shoal Creek | Increase culvert size at Hidden Creek Drive; detention pond near Shoal Creek |
| Н | Shobe Road at Unnamed Tributary to Crooked Creek | Raise roadway; lengthen bridge; detention pond |
| T | Oak Glenn Subdivision | Improve channel throughout neighborhood; increase culvert sizes |
| J | Lea Circle | Buyout properties |

4.0 Conceptual Layout and Planning Level Opinion of Project Costs

Conceptual layout drawings and planning level opinions of project costs are provided in the appendix following each project report. These layouts are for graphical and planning purposes only and are not for construction.





5.0 Prioritization of Projects

A preliminary prioritization project list will be provided to the City for review and comment. The final list of prioritization will be included in the final draft of this report.

6.0 Next Steps

Once prioritization of the projects has been completed, the City can utilize this list to focus on procuring construction level plans for those projects listed as highest priority.

Additionally, the Letter of Map Revision (LOMR) planned for Shoal Creek and Shoal Creek Tributary should be finalized and submitted to FEMA following completion of drainage improvements currently being performed by the City.



Appendix A

Phase 2

Boone Road at Hurricane Creek Improvements

Comprehensive Drainage Master Plan City of Bryant

Phase 2 Boone Road at Hurricane Creek Improvements

Prepared by:



4701 Northshore Drive North Little Rock, Arkansas 72118

January 2025

Garver Project No.: 20T20090



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1.0 Overall Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- Identify current and future drainage problems;
- Generate proposed solutions to identified problems;
- · Develop a Capital Improvement Plan (CIP); and
- Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

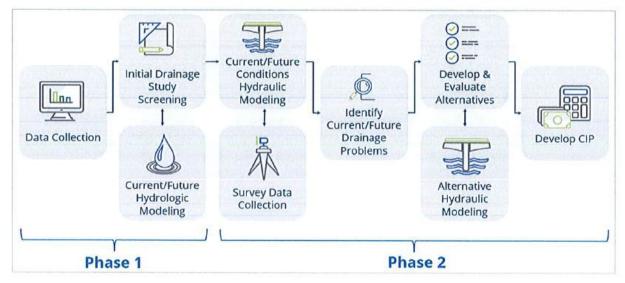


Figure 1. CDMP Project Process

This report discusses the processes and findings of a Phase 2 study of Boone Road at Hurricane Creek.





2.0 General Location Information

Boone Road is a minor arterial class roadway in the City of Bryant connecting Alcoa Road and Reynolds Road (Highway 183). The entirety of Boone Road is located in the Hurricane Creek Basin, with a bridge crossing over Hurricane Creek located near Bishop Park. A project location map is shown in **Figure 2**.

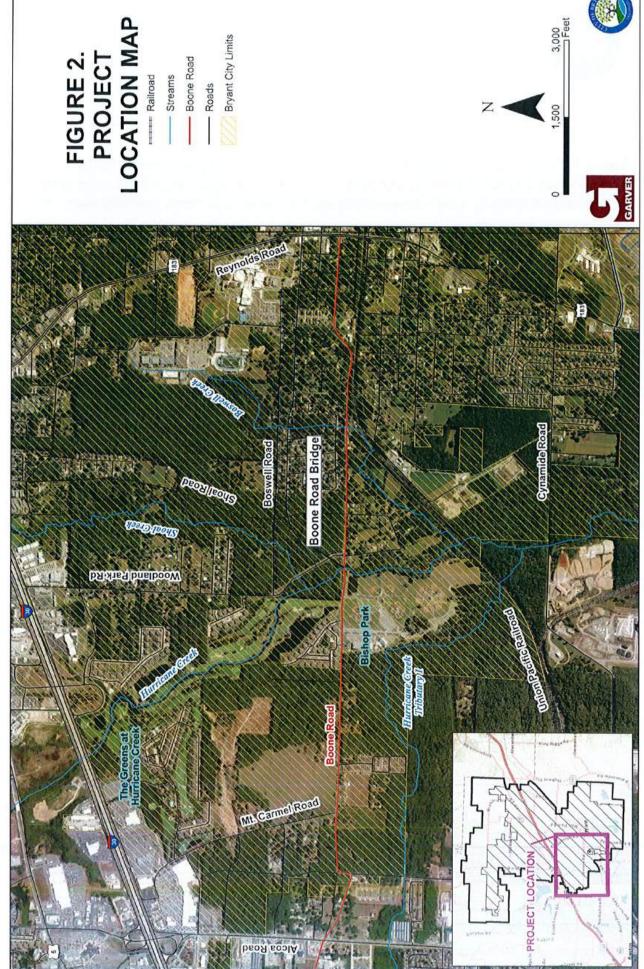
3.0 National Flood Insurance Program (NFIP) Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0360E, 0370E, and 0380E. The project area of Boone Road at Hurricane Creek is within FIRM panel 0360E.

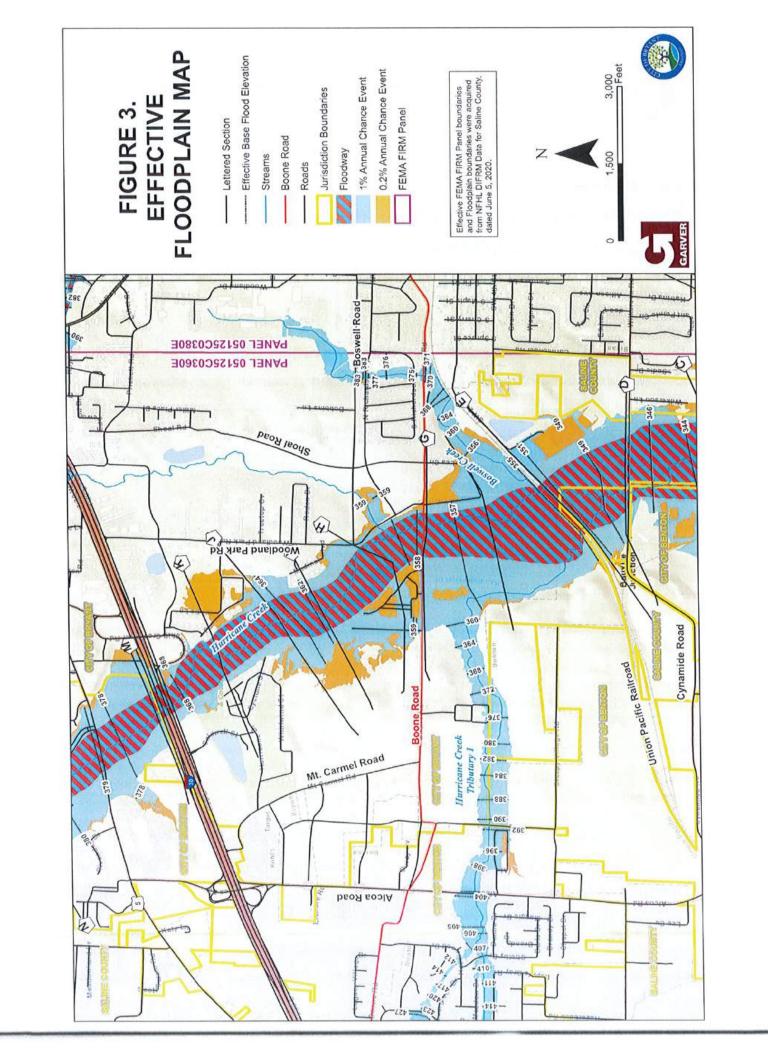
Hurricane Creek is mapped as Zone AE with floodway. The Effective floodplain mapping for the project area is shown in **Figure 3**.

Since Hurricane Creek is a Zone AE mapped floodplain, Effective hydrologic and hydraulic (H&H) studies were available. A FEMA data request was submitted, and Effective data was received from FEMA on March 23, 2022. In addition to hydrologic and hydraulic models, Technical Support Data Notebooks (TSDN) for the Effective hydrologic and hydraulic studies were received. The hydrology TSDN was dated March 31, 2014, and the hydraulic TSDN was dated November 11, 2014.











4.0 Data Collection

4.1 Historical Records of Drainage and Flooding

4.1.1 City and Public News Records

The City has documented many past flood events along Boone Road, with at least six documented events occurring since 2011. These events involve overtopping of the roadway in the vicinity of the Hurricane Creek bridge and the culvert located just to the east of the bridge that drains the golf course pond. **Table 1** lists the documented events and the estimated rainfall amounts.

Table 1. Major Flood Events along Boone Road near Hurricane Creek

| Total Event Precipitation (in) |
|-----------------------------------|
| 6.26* |
| 7.02* |
| 5.53* |
| 6.22* |
| 5.14* |
| 8.44* |
| 3.35* |
| 3.87** |
| |

^{*}Total event precipitation from NOAA weather station at Adams Field at Little Rock National Airport.

Figure 4 displays the location of typical flooding along Boone Road near the pond relief culverts. **Figure 5** shows the flooding experienced within Bishop Park during a typical roadway-overtopping event.

4.1.2 Resident Comment Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received for the city planning area. Several comments were made within the area of Boone Road and Hurricane Creek; eight comments are within half a mile of the Boone Road bridge at Hurricane Creek. The known flood areas and resident comment locations are provided on **Figure 6**.



^{**} Total event precipitation from RJN rainfall monitoring site BRRG06 near Hurricane Creek





Figure 4. Boone Road near Hurricane Creek, looking west (November 28, 2015)

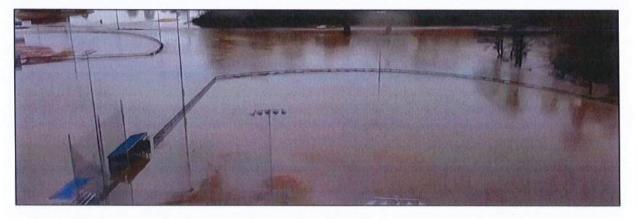
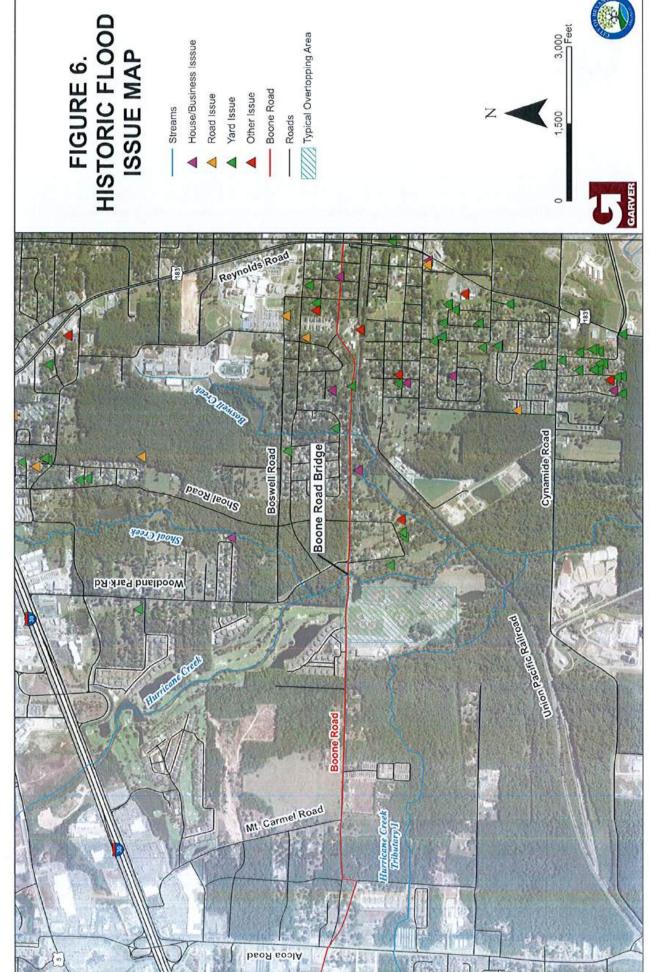


Figure 5. Bishop Park, looking north (February 23, 2018)









4.2 GIS and Topographic Data

For this project, 1-meter Digital Elevation Model (DEM) lidar topography from USGS Ouachita study was acquired from the Arkansas GIS Office. Project survey throughout the project area was collected by Garnat to supplement the lidar data.

5.0 Initial Screening Study

During Phase 1, an Initial Screening Study was performed for the Hurricane Creek basin. For this screening, a hydraulic model was developed for the entire basin using 2D HEC-RAS and utilized rain-on-grid methodology to apply precipitation directly to the ground surface. This model was used to identify flood issues throughout the City, so is considered a qualitative model and not to be used for design. However, the data is useful in determining relative flood risk, and a flood severity index (FSI) was developed using the model results. Flood severity ranges from 0 to 4, with 4 being the most severe. The FSI classifications are listed in **Table 2**. **Table 3** displays the FSI rankings for Boone Road area.

Table 2. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|-----------------------------------|--|
| FS0 | Minimal severity | < 0.5 | |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |





Table 3. Flood Severity Index For Hurricane Creek Model Area

| Location | Stream | Basin | Potential Drainage | | Sev | ood erit dex | |
|------------|--------------------|--------------------|--|------|-------|--------------------|--------|
| | Name | Dasiii | Issue | 5 yr | 10 yr | 50 yr | 100 yr |
| Boone Road | Hurricane Creek | Hurricane Creek | Roadway overtopping; home flooding | 2 | 3 | 3 | 3 |

Because of the high likelihood of flooding at multiple storm events, and historical flood issues in the area, Boone Road was selected for further hydraulic study in order to identify conceptual drainage improvements.

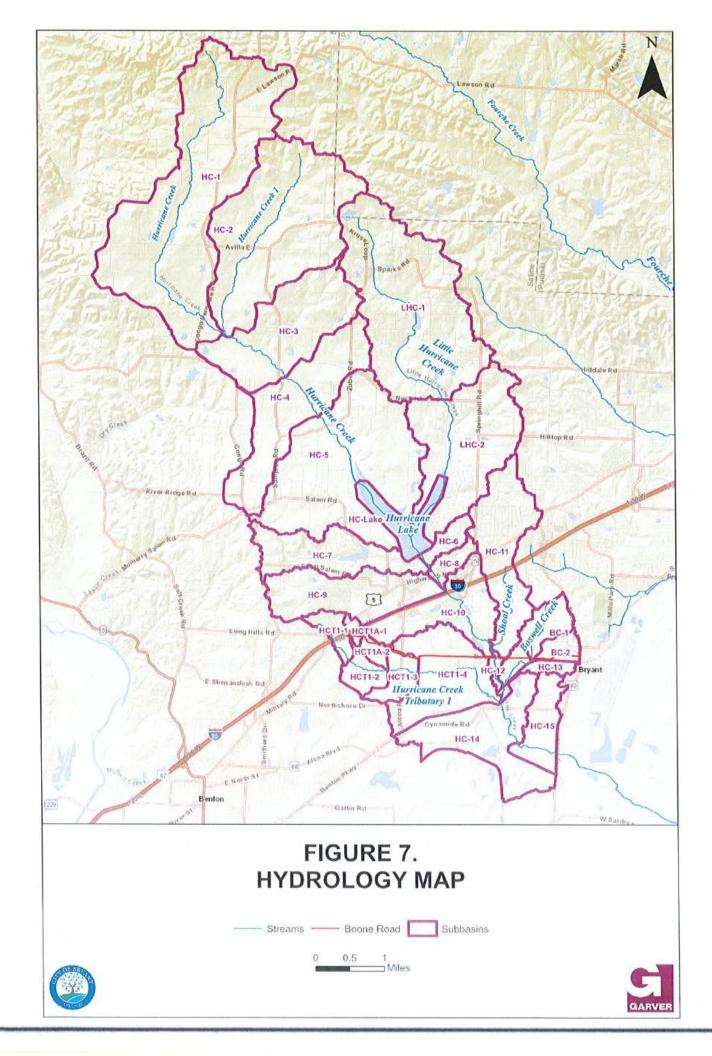
6.0 Hydrology

In Phase 1 of the CDMP, the Effective hydrologic model of the Hurricane Creek basin was updated using HEC-HMS 4.10. The determined flow rates are provided in **Table 4**. Delineated subbasins for Hurricane Creek are shown in **Figure 7**.

Table 4. Summary of Discharges for Hurricane Creek

| Location along Stream | Drainage area (sq mi) | Flow Rate (cfs) | | | | | | |
|---|-----------------------------|-----------------|-------|--------|--------|--------|--------|--------|
| | | 2-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr | 500-yr |
| Hurricane Lake Outfall | 24.88 | 4,820 | 6,921 | 8,684 | 11,697 | 14,076 | 16,593 | 22,633 |
| Immediately upstream of Interstate 30 | 28.05 | 5,748 | 8,317 | 10,410 | 13,967 | 16,681 | 19,494 | 26,550 |
| Immediately upstream of Boone Road | 30.88 | 5,682 | 8,343 | 10,567 | 13,995 | 16,773 | 19,762 | 27,051 |
| Immediately upstream of Cynamide Road | 34.55 | 5,881 | 8,642 | 10,926 | 14,724 | 17,687 | 20,812 | 28,511 |
| Immediately upstream of State Highway 183 | 36.83 | 5,698 | 8,455 | 10,827 | 14,825 | 17,951 | 21,256 | 29,353 |







7.0 Hydraulics

Two model scenarios were created, one using 1D analysis and the other using 2D analysis. For the 1D analysis, the Effective model received from FEMA was utilized and updated as needed. The hydraulic analysis was performed using HEC-RAS version 6.3.1. Additionally, in order to understand flow patterns throughout the project area, including the diversion of flow within the golf course and the general flow patterns of a potential development area near the intersection of Boone Road and Mt. Carmel Road, a 2D HEC-RAS model was also developed. These models are described in more detail in the following sections.

The 2-, 5-, 10-, 25-, 50-, 100-, and 500-year flows obtained from the updated HEC-HMS model discussed in Section 6.0 were utilized in both models.

7.1 2D HEC-RAS Model

Initially, a 2D HEC-RAS model was created and run to best understand the complex flow patterns of the floodplain in the vicinity of Boone Road as well as the potentially developing area at Mt. Carmel and Boone Roads.

7.1.1 Model Domain

To be comparable to FEMA data for this stream and to also allow for appropriate flow inputs, the model boundary was set from just downstream of I-30 to just downstream of the railroad. Lateral extents were set outside of the mapped floodplain, with tributaries modeled to points upstream enough from Hurricane Creek so that the flow inputs for these creeks did not have a direct effect on Hurricane Creek results.

7.1.2 2D Mesh Development

The mesh was structured so that the elements are larger in the fringes of the floodplain and in higher elevations that are less likely to be inundated during the model simulations. The element density is generally the greatest at the bridge openings, roadway embankments, and major streams. A finer mesh (more nodes and elements) will lead to longer model runtimes, so the mesh was developed to produce acceptable results but minimize excessive runtimes. The mesh contains 11,153 cells with a maximum cell size of 25,927 square feet and a minimum cell size of 98 square feet.





The main channel of Hurricane Creek was represented with rectangular adaptive elements. Likewise, roadway embankments are generally represented by quadrilateral elements. The remainder of the mesh is composed of square non-adaptive elements. Breaklines were drawn along the thalweg of smaller channels to ensure that the channels were represented in the mesh. Breaklines were also used to define significant breaks in topography and to adjust the mesh density.

7.1.3 2D Model Terrain

The terrain data for the 2D model was built from 1-meter (DEM) lidar topography discussed in **Section 4.2**.

7.1.4 2D Model Boundary Conditions

The 2D hydrology was set up with multiple inflow locations. Inflow hydrographs were set at the inflow locations for Hurricane Creek from the north, Shoal Creek from the northeast, Boswell Creek from the east, and Hurricane Creek Tributary 1 from the west. Inflow hydrographs were taken from the updated Effective HEC-HMS model for the Hurricane Creek basin performed in Phase 1 of the CDMP.

As the inflow hydrographs were set to only include flow for areas outside of the model boundaries, the additional runoff within the model boundary was represented utilizing the rain-on-mesh feature in 2D HEC-RAS. This allows for precipitation to be represented in a hyetograph, with the 2D model determining runoff for a specific storm event. It also allows for non-fluvial areas within the model to be analyzed, with low lying areas that pond to be mapped. Additional inputs required for this methodology include land cover and soil information. The downstream channel boundary was set to normal depth slope of 0.002 ft/ft, and the overbank boundary conditions were set to normal depth slope of 0.001 ft/ft.

The model domain, mesh, and boundary locations are all shown in Figure 8.





7.1.5 2D Model Roughness Coefficients

The land use types, and their corresponding Manning's n roughness coefficients are listed in Table 3-5.

Table 5. Land Use Types and Roughness Coefficients

| Land Use Type | Manning's <i>n</i> Value |
|--------------------------|-----------------------------|
| Barren Land | 0.06 |
| Deciduous Forest | 0.1 |
| Developed Open Space | 0.0404 |
| Developed Low Density | 0.0678 |
| Developed Medium Density | 0.0678 |
| Developed High Density | 0.0404 |
| Grassland | 0.0368 |
| Open Water | 0.001 |
| Parking Lot | 0.016 |
| Road | 0.02 |

7.1.6 2D Model Structures

Existing Conditions parameters for the Boone Road bridge are given in Table 6.

Table 6. Existing Boone Road Bridge Structure

| Parameter | Value |
|---------------------------------------|------------------|
| Culvert Size & Type | 3-10'x3' RCB |
| Upstream Invert Elevation | 353.51 ft NAVD88 |
| Downstream Invert Elevation | 353.01 ft NAVD88 |
| Box Length | 45 ft |
| Minimum Top of Road within Floodplain | 357.04 ft NAVD88 |
| Open Flow Area | 90 sq. ft |



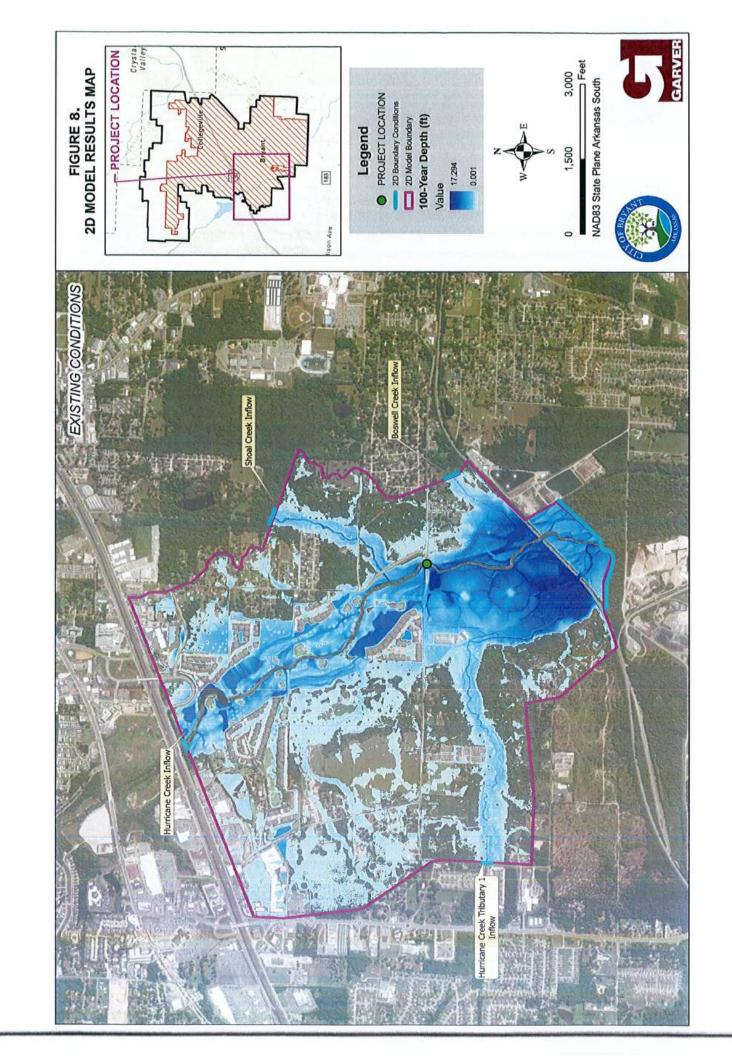


7.1.7 2D Existing Conditions Results

The 100-year water depth results are shown in Figure 8. The results of the 2D Existing Conditions model were reviewed to determine the existing flow patterns of the area. The results provided information regarding flow patterns in the model area. Of particular interest are the flow patterns in the area near Mt. Carmel Road and Boone Road. Several parcels of land near this intersection have been planned for development of a subdivision (Magnolia Development Phase 1 and Phase 2). Because of the nearby floodplain and known flood issue along Boone Road, the City requested that Garver determine the flow patterns within this area. The flow patterns are shown in Figure 9.

While the flow patterns were reviewed in the 2D model and utilized to develop preliminary design plans to improve flooding at Boone Road, the model itself was not utilized for the purposes of determining a no-rise design. The 1D no-rise analysis will be discussed in the following section.







7.2 1D HEC-RAS Model

Because a no rise design is inherently difficult to model in a 2D model, a 1D model of the stream was created. As discussed in Section 3.0, a data request was made to FEMA for all Effective hydraulic models along Hurricane Creek. Garver received a HECRAS model of the creek from approximately 2,300 feet downstream of Zuber Road to Highway 183 (Reynolds Road). The received model was created in HEC-RAS v4.1, and the accompanying Technical Support Data Notebook (TSDN) was dated November 11, 2014.

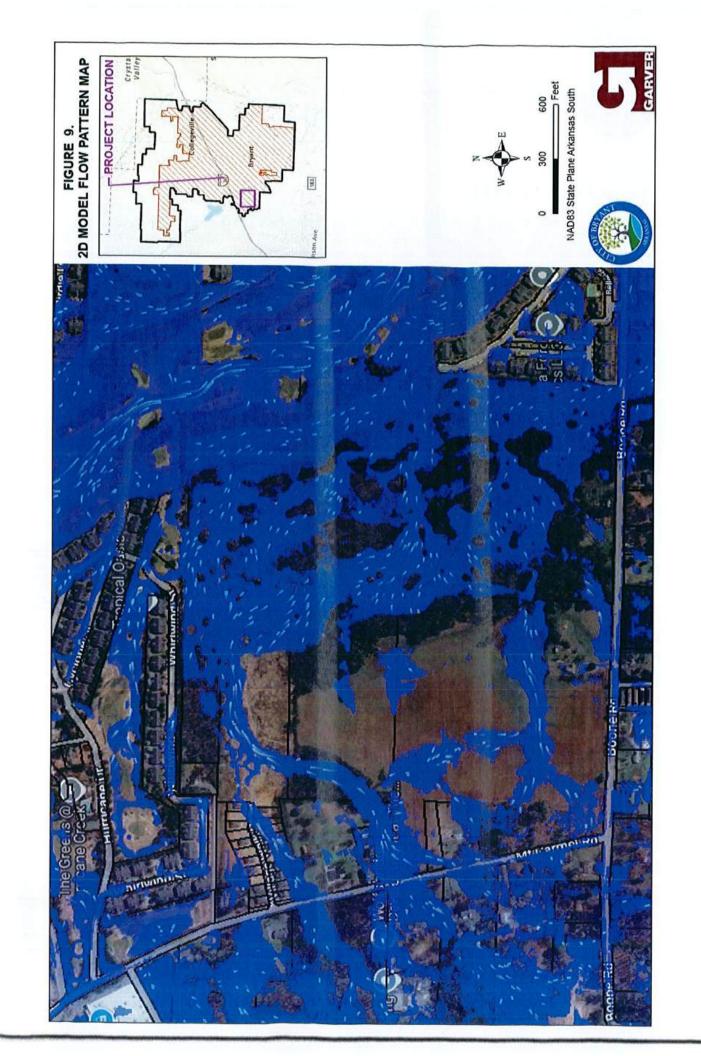
7.2.1 Duplicate Effective Model

The received Effective model was brought into HEC-RAS v6.3.1 and run as the Duplicate Effective Model (full DEM). After running the full model, it was trimmed to Lettered Section M, which is located just upstream of the I-30 westbound service road. The trimmed Duplicate Effective Model (DEM) was compared to the full DEM to show that trimming of the model did not significantly affect results. The comparison showed that a few profiles were changed by 0.01 ft at a few cross sections. This change is considered acceptable, so the trimmed DEM was utilized for future comparisons.

7.2.2 Corrected Effective/Existing Conditions Model

The Effective FEMA model was utilized and updated in order to represent the current conditions of the project area, and the updated flowrates calculated for the project. Several cross sections were also reoriented to be more normal to the overall floodplain. Additionally, parameters such as reach lengths, ineffective area settings, and bank stations were updated were necessary. This Corrected Effective Model (CEM) was then run and compared to the DEM. Survey data was also collected for this project. Where available, channel or structure information was updated to reflect project survey. Where not available, structure information reflects input in the Effective model. **Table 7** provides a comparison of the Trimmed DEM and CEM models. Results show differences of up to 0.57 ft between the two models; however, the average difference is 0.05 ft. These differences can be attributed to adjustments to the geometry as well as the change in flow rates.







| DEM River Station | FEMA Lettered Section | DEM 100-YR WSEL (ft NAVD88) | CEM River Station | CEM 100-YR WSEL(ft NAVD88) | Difference e (ft) | | | |
|-------------------------|-----------------------------|-----------------------------------|-------------------------|----------------------------------|----------------------|--|--|--|
| 325403 | В | 340.45 | 325403 | 340.79 | 0.34 | | | |
| 324913 | - | 340.22 | 324913 | 340.54 | 0.32 | | | |
| 324645 | | 339.79 | 324645 | 340.15 | 0.36 | | | |
| 324531 | | Highway 183/Reynolds Road | | | | | | |
| 324427 | A | 338.8 | 324427 | 338.9 | 0.10 | | | |
| 324233 | - | 338.84 | 324233 | 338.95 | 0.11 | | | |
| 323990 | | 338.72 | 323990 | 338.85 | 0.13 | | | |

The results of the Corrected Effective Model show that Boone Road overtops considerably for all modeled storm events, with the 2-year event overtopping the roadway by approximately 1.5 feet. The model results are verified by the multiple known overtopping events of Boone Road.

Existing Conditions parameters for the Boone Road bridge are given in Table 8.

Table 8. Existing Boone Road Bridge Structure

| Parameter | Value |
|---------------------------------------|--------------------------|
| Bridge Configuration | 6 @ 31' (186 total feet) |
| Pier Type and Size | 1'-4" square |
| Abutment Type | Vertical |
| Minimum Top of Road within Floodplain | 353 ft NAVD88 |
| Open Flow Area | 1,327 sq. ft |

7.3 Proposed Conditions

It is noted that while Boone Road overtops in all modeled events, the bridge crossing is not in pressure flow except for the 500-year event. This suggests that in order to prevent overtopping of the roadway, the road embankment should be raised throughout the floodplain. The most significant design constraint for this project is the requirement of no-rise to the 100-year WSEL, since Hurricane Creek is mapped as Zone AE with floodway. A map revision is not feasible in this location because of the multiple buildings within the floodplain in the immediate area of Boone Road, including the Lakes at Hurricane Creek apartment complex located on the north side of the roadway. Some of



the apartment buildings are mapped within the Corrected Effective 100-year floodplain. FEMA requires that no rise occur at any structure, so a no rise condition must be met for this project.

Since the roadway should be raised to prevent overtopping, the bridge should also be lengthened to mitigate a rise in WSEL. 25-year design condition was utilized for the proposed design. Proposed Conditions parameters for the Boone Road bridge are given in Table 9.

Table 9. Proposed Boone Road Bridge Structure

| Parameter | Value |
|---------------------------------------|-----------------------------|
| Bridge Configuration | 17 @ 60' (1,020 total feet) |
| Pier Type and Size | 2' square |
| Abutment Type | Vertical |
| Minimum Top of Road within Floodplain | 356.3 ft NAVD88 |
| Open Flow Area | 4,058 sq. ft |

In addition to the proposed Boone Road Bridge, a relief culvert is proposed to the immediate west of the apartment complex. Modeling shows that some flow currently passes along the west side of the apartments and overtops Boone Road in that area, continuing south to the west of the Bishop Park complex. A Triple-10'x3' box culvert is proposed to carry flow under the road at this location, with a proposed channel to carry the flow southward. Proposed Conditions parameters are given in Table 10..

Table 10. Proposed Boone Road Relief Culvert Structure

| Parameter | Value |
|-----------------------------|------------------|
| Culvert Size and Type | 3-10'x3' RCB |
| Upstream Invert Elevation | 353.55 ft NAVD88 |
| Downstream Invert Elevation | 353.00 ft NAVD88 |
| Open Flow Area | 90 sq. ft |

A comparison of existing and proposed water surface elevations during the 100-year event is given in **Table 11**.





Table 11. Comparison of Existing and Proposed WSELs for 100-year event

| River Station | CEM WSEL (ft NAVD88) | Proposed WSEL (ft NAVD88) | Difference (ft) | | |
|------------------|-------------------------|------------------------------|--------------------|--|--|
| 344367 | 378.18 | 378.18 | 0.00 | | |
| 344270 | | I-30 W Service Road | | | |
| 344244 | 375.22 | 375.22 | 0.00 | | |
| 344231 | 375.21 | 375.21 | 0.00 | | |
| 344160 | | I-30 E&W Main Lanes | | | |
| 344073 | 374.19 | 374.19 | 0.00 | | |
| 344064 | 373.47 | 373.47 | 0.00 | | |
| 344047 | | I-30 E Service Road | | | |
| 343984 | 368.5 | 368.5 | 0.00 | | |
| 343895 | 368.29 | 368.29 | 0.00 | | |
| 343514 | 367.77 | 367.77 | 0.00 | | |
| 343367 | 367.63 | 367.63 | 0.00 | | |
| 343359 | Gol | f Course Cart Path Bridge | | | |
| 343342 | 367.52 | 367.52 | 0.00 | | |
| 343197 | 367.52 | 367.52 | 0.00 | | |
| 342824 | 367.22 | 367.22 | 0.00 | | |
| 342252 | 367.22 | 367.23 | 0.01* | | |
| 342167 | 366.91 | 366.91 | 0.00 | | |
| 342139 | | Golf Course Pond Dam | | | |
| 342132 | 366.81 | 366.81 | 0.00 | | |
| 342124 | Gol | f Course Cart Path Bridge | | | |
| 342111 | 366.77 | 366.77 | 0.00 | | |
| 341986 | 366.81 | 366.81 | 0.00 | | |
| 341045 | 364.85 | 364.85 | 0.00 | | |
| 340646 | 364.78 | 364.78 | 0.00 | | |
| 340508 | 364.76 | 364.76 | 0.00 | | |
| 340500 | Gol | f Course Cart Path Bridge | | | |
| 340493 | 364.45 | 364.45 | 0.00 | | |
| 340327 | 363.02 | 363.04 | 0.02* | | |
| 339747 | 361.02 | 361.01 | -0.01 | | |
| 339023 | 360.56 | 360.53 | -0.03 | | |
| 338266 | 360.22 | 360.18 | -0.04 | | |





| River Station | CEM WSEL (ft NAVD88) | Proposed WSEL (ft NAVD88) | Difference (ft) |
|------------------|-------------------------|------------------------------|--------------------|
| 338110 | 359.95 | 359.9 | -0.05 |
| 338106 | Golf | Course Cart Path Bridge | |
| 338082 | 359.74 | 359.7 | -0.04 |
| 337989 | 359.29 | 359.19 | -0.10 |
| 337411 | 358.16 | 358.17 | 0.01* |
| 337140 | 357.94 | 357.87 | -0.07 |
| 336872 | 357.77 | 357.72 | -0.05 |
| 336696 | 357.34 | 357.29 | -0.05 |
| 336623 | | Boone Road | |
| 336529 | 357.15 | 357.15 | 0.00 |
| 336409 | 357.13 | 357.13 | 0.00 |
| 336047 | 357.01 | 357.01 | 0.00 |
| 335843 | 356.89 | 356.89 | 0.00 |
| 335217 | 356.77 | 356.77 | 0.00 |
| 334476 | 356.67 | 356.67 | 0.00 |
| 334001 | 356.43 | 356.43 | 0.00 |
| 333871 | 355.21 | 355.21 | 0.00 |
| 333812 | | Railroad | |
| 333713 | 350.85 | 350.85 | 0.00 |
| 332978 | 349.95 | 349.95 | 0.00 |
| 332497 | 349 | 349 | 0.00 |
| 332034 | 348.38 | 348.38 | 0.00 |
| 331979 | 348.32 | 348.32 | 0.00 |
| 331922 | | Cynamide Road | |
| 331852 | 346.46 | 346.46 | 0.00 |
| 331715 | 346.22 | 346.22 | 0.00 |
| 331172 | 345.09 | 345.09 | 0.00 |
| 330046 | 343.79 | 343.79 | 0.00 |
| 329418 | 342.9 | 342.9 | 0.00 |
| 328479 | 342.03 | 342.03 | 0.00 |
| 327262 | 341.47 | 341.47 | 0.00 |
| 326159 | 341.02 | 341.02 | 0.00 |
| 325403 | 340.79 | 340.79 | 0.00 |





| River Station | CEM WSEL (ft NAVD88) | Proposed WSEL (ft NAVD88) | Difference (ft) | |
|------------------|---------------------------|------------------------------|--------------------|--|
| 324913 | 340.54 | 340.54 | 0.00 | |
| 324645 | 340.15 | 340.15 | 0.00 | |
| 324531 | Highway 183/Reynolds Road | | | |
| 324427 | 338.9 | 338.9 | 0.00 | |
| 324233 | 338.95 | 338.95 | 0.00 | |
| 323990 | 338.85 | 338.85 | 0.00 | |

^{*} Currently the proposed model shows very slight rises at three cross sections; however, the bridge design is conceptual and multiple design aspects will change for preliminary and final design. Therefore it is anticipated that the proposed WSELs may change slightly over the course of detailed design, and final design parameters may need to be iterated to meet no rise conditions. The conceptual design is a best approximation in order to prepare cost estimates.

8.0 Conceptual Layout and Planning Level Opinion of Project Costs

A conceptual layout drawing and planning level opinion of project costs are provided in Appendix A-1. This layout is for graphical and planning purposes only and is not for construction.



Appendix A-1

Phase 2 Boone Road at Hurricane Creek Improvements Conceptual Layout and Planning Level Opinion of Project Costs



Table 7. 100-Year DEM and CEM Results along Hurricane Creek

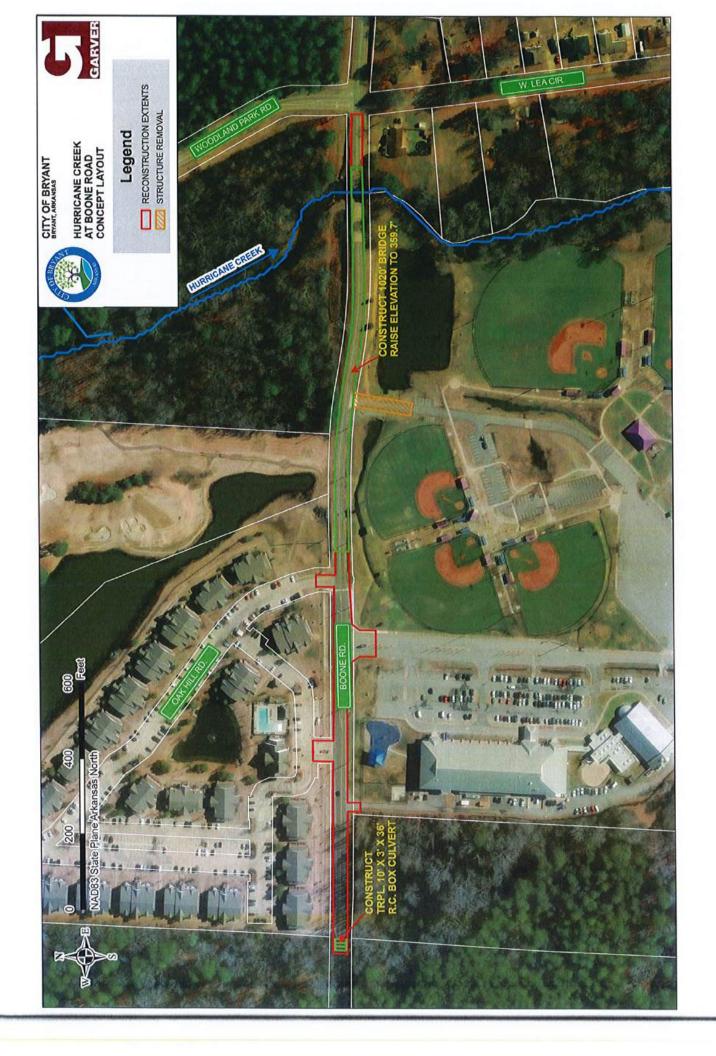
| DEM River Station | FEMA Lettered Section | DEM 100-YR WSEL (ft NAVD88) | CEM River Station | CEM 100-YR WSEL(ft NAVD88) | Difference e (ft) | |
|-------------------------|------------------------------|-----------------------------------|-------------------------|----------------------------------|----------------------|--|
| 344367 | | 378.25 | 344367 | 378.18 | -0.07 | |
| 344270 | I-30 W Service Road | | | | | |
| 344244 | | 375.27 | 344244 | 375.22 | -0.05 | |
| 344231 | | 375.26 | 344231 | 375.21 | -0.05 | |
| 344160 | | I-30 E&W Main Lanes | | | | |
| 344073 | | 374.21 | 344073 | 374.19 | -0.02 | |
| 344064 | | 373.47 | 344064 | 373.47 | 0.00 | |
| 344047 | | 1-3 | 0 E Service R | oad | | |
| 343984 | L | 368.54 | 343984 | 368.5 | -0.04 | |
| 343895 | - | 368.3 | 343895 | 368.29 | -0.01 | |
| 343514 | Francisco | 367.79 | 343514 | 367.77 | -0.02 | |
| 343367 | - | 367.6 | 343367 | 367.63 | 0.03 | |
| 343359 | | Golf Co | ourse Cart Pat | th Bridge | | |
| 343342 | - | 367.49 | 343342 | 367.52 | 0.03 | |
| 343197 | - | 367.48 | 343197 | 367.52 | 0.04 | |
| 342824 | - | 367.33 | 342824 | 367.22 | -0.11 | |
| 342252 | | 367.3 | 342252 | 367.22 | -0.08 | |
| 342167 | - | 367.02 | 342167 | 366.91 | -0.11 | |
| 342139 | Golf Course Pond Dam | | | | | |
| 342132 | K | 366.86 | 342132 | 366.81 | -0.05 | |
| 342124 | Golf Course Cart Path Bridge | | | | | |
| 342111 | - | 366.83 | 342111 | 366.77 | -0.06 | |
| 341986 | | 366.87 | 341986 | 366.81 | -0.06 | |
| 341045 | - | 365.03 | 341045 | 364.86 | -0.17 | |
| 340646 | J | 364.89 | 340646 | 364.78 | -0.11 | |
| 340508 | - | 364.87 | 340508 | 364.77 | -0.10 | |
| 340500 | Golf Course Cart Path Bridge | | | | | |
| 340493 | (*) | 364.46 | 340493 | 364.46 | 0.00 | |
| 340327 | - | 363.05 | 340327 | 363.01 | -0.04 | |
| 339747 | 1 | 361.62 | 339747 | 361.05 | -0.57 | |
| 339035 | | 361.42 | 339023 | 360.6 | - | |





| DEM River Station | FEMA Lettered Section | DEM 100-YR WSEL (ft NAVD88) | CEM River Station | CEM 100-YR WSEL(ft NAVD88) | Difference (ft) |
|-------------------------|-----------------------------|-----------------------------------|-------------------------|----------------------------------|---------------------|
| 338264 | - | 361.21 | 338266 | 360.27 | - |
| 338109 | Н | 361.16 | 338110 | 360.01 | Y CALOR NAME OF THE |
| 338106 | 1 | Golf Co | urse Cart Pat | h Bridge | |
| 338085 | - | 360.07 | 338082 | 359.81 | _ |
| 337980 | - | 359.86 | 337989 | 359.42 | _ |
| 337402 | - | 359.27 | 337411 | 358.55 | |
| 336798 | - | 357.98 | 337140 | 358.41 | _ |
| | - | | 336872 | 358.28 | |
| 336650 | - | 357.51 | 336696 | 358 | - |
| 336623 | | | Boone Road | | |
| 336545 | G | 357.34 | 336529 | 357.15 | - |
| 336451 | - | 357.33 | 336409 | 357.13 | 100000-2000 |
| | - | - | 336047 | 357.01 | - |
| 335843 | - | 356.96 | 335843 | 356.89 | -0.07 |
| 335217 | F | 356.82 | 335217 | 356.77 | -0.05 |
| 334476 | 21/2 | 356.72 | 334476 | 356.67 | -0.05 |
| 334001 | - | 356.5 | 334001 | 356.43 | -0.07 |
| 333871 | | 355.32 | 333871 | 355.21 | -0.11 |
| 333812 | | Railroad | | | |
| 333713 | E | 351.51 | 333713 | 350.85 | -0.66 |
| 332978 | • | 350.1 | 332978 | 349.95 | -0.15 |
| 332497 | - | 349.07 | 332497 | 349 | -0.07 |
| 332034 | - | 348.35 | 332034 | 348.38 | 0.03 |
| 331979 | D | 348.35 | 331979 | 348.32 | -0.03 |
| 331922 | | C | ynamide Roa | d | |
| 331852 | - | 346.69 | 331852 | 346.46 | -0.23 |
| 331715 | - | 346.49 | 331715 | 346.22 | -0.27 |
| 331172 | - | 345.53 | 331172 | 345.09 | -0.44 |
| 330046 | - | 343.94 | 330046 | 343.79 | -0.15 |
| 329418 | С | 343.09 | 329418 | 342.9 | -0.19 |
| 328479 | - | 341.99 | 328479 | 342.03 | 0.04 |
| 327262 | - | 341.2 | 327262 | 341.47 | 0.27 |
| 326159 | - | 340.73 | 326159 | 341.02 | 0.29 |







Planning Level Opinion of Project Costs Boone Road at Hurricane Creek Improvements Item Description Unit Quantity Unit Cost **Total Cost Roadway Construction** Mile 0.24 \$ 7,395,833.33 \$ 1,775,000.00 Hurricane Creek Bridge (30' x 1020') S.F. \$ \$ 10,404,000.00 30600 340.00 Triple 10' x 3' Reinforced Concrete Box Culvert (36') S.F. 1080 \$ 185.00 \$ 199,800.00 **Driveway Pavement Repair** S.Y. 525 \$ 140.00 \$ 73,500.00 \$ \$ **Asphalt Pavement Repair** S.Y. 538 200.00 107,600.00 1 \$ 1,891,279.00 Site Preparation (10%) L.S. \$ 1,891,279.00 Traffic Control (1%) L.S. 1 189,473.00 \$ 189,473.00 1 \$ **Erosion Control (3%)** L.S. 568,492.00 568,492.00 L.S. Contingency (20%) 1 \$ 3,791,382.00 \$ 3,791,382.00 **Total Estimated Construction Cost** \$ 19,000,526.00 Additional Associated Costs Utility Relocation (10%) \$ 1,900,053.00 \$ 1,900,053.00 L.S. 1 Engineering and Survey Fee (18%) \$ 3,420,095.00 L.S. 1 \$ 3,420,095.00 RW Acquisition and Easements (2%) L.S. 1 380,011.00 \$ 380,011.00 **Total Estimated Project Cost** \$ 24,700,700.00

Appendix B

Phase 2 Boone Road at Boswell Creek Improvements

Comprehensive Drainage Master Plan City of Bryant

Phase 2

Boone Road at Boswell Creek Improvements

Prepared by:



4701 Northshore Drive
North Little Rock, Arkansas 72118

January 2025

Garver Project No.: 20T20090



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Appendix B-1: Conceptual Layout and Planning Level Opinion of Project Costs





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1.0 Overall Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- · Identify current and future drainage problems;
- Generate proposed solutions to identified problems;
- Develop a Capital Improvement Plan (CIP); and
- Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

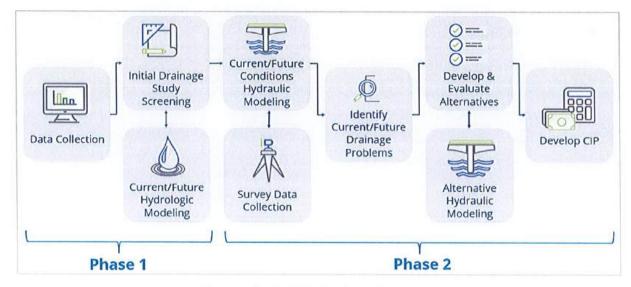


Figure 1. CDMP Project Process

This report discusses the processes and findings of a Phase 2 study for Boone Road at Boswell Creek.





2.0 General Information

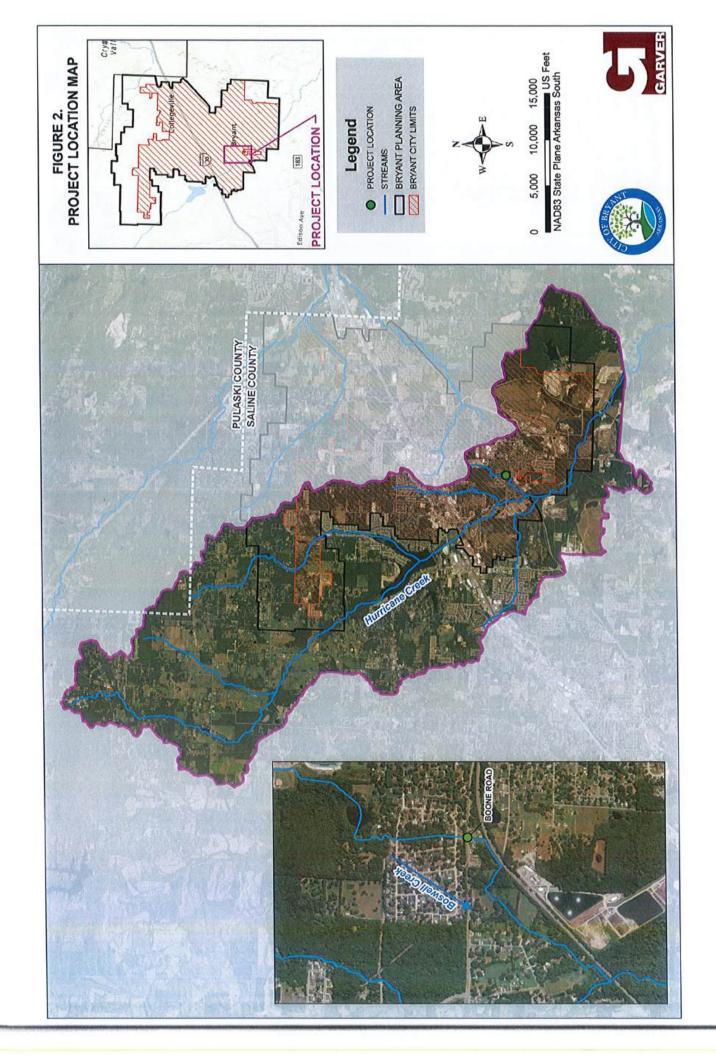
Boone Road is a minor arterial class roadway in the City of Bryant connecting Alcoa Road and Reynolds Road (Highway 183). The entirety of Boone Road is located in the Hurricane Creek Basin. Boswell Creek is a tributary to Hurricane Creek, with a culvert crossing under Boone Road approximately half a mile east of the intersection with Woodland Park Road. This crossing was identified in Phase 1 of the CDMP as a drainage problem. The project location map is shown in **Figure 2**.

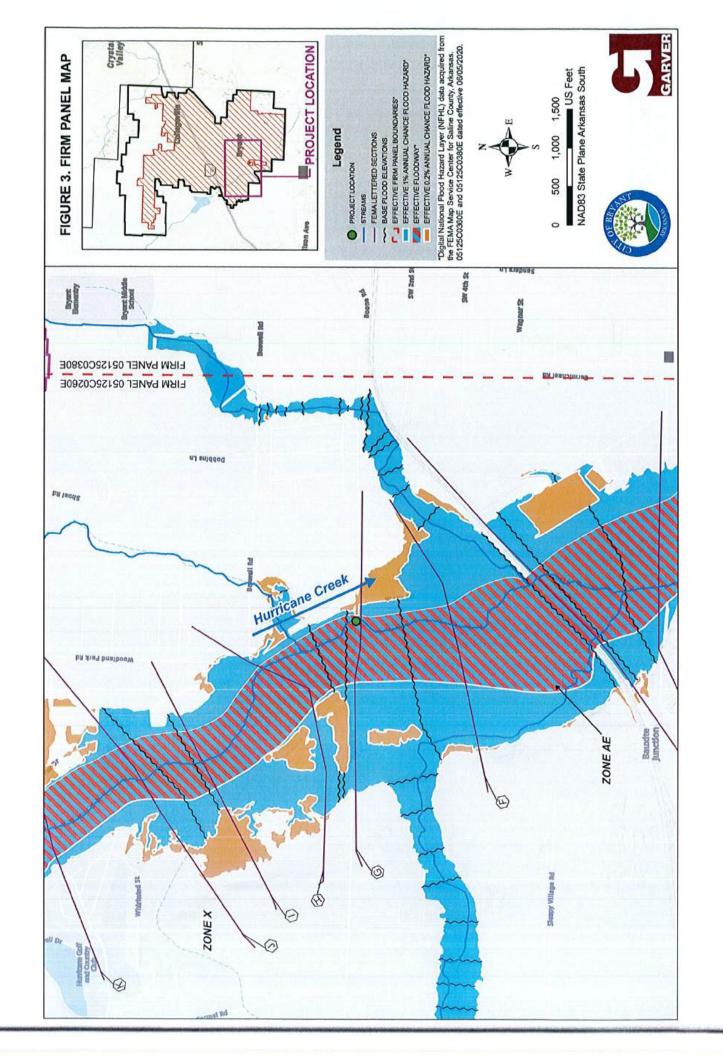
3.0 National Flood Insurance Program (NFIP) Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0360E, 0370E, and 0380E. The project area of Boone Road at Boswell Creek is within FIRM Panel 0360E.

Boswell Creek is mapped as Zone AE. The Effective floodplain mapping for the project area is shown in **Figure 3**.









4.0 Data Collection

4.1 GIS and Topographic Data

For this project, 1-meter Digital Elevation Model (DEM) lidar topography from USGS Ouachita study was acquired from the Arkansas GIS Office. No survey data was collected for this location. Garver conducted a site visit to collect culvert sizes. Figures 4 and 5 show Boswell Creek in the area of Boone Road.

4.2 Resident Comment Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received for the city planning area. 119 comments were within the Hurricane Creek Drainage Basin. One comment was received for Boone Road within the project area for Boswell Creek. This comment referenced flow crossing over Boone Road every time it rains.







Figure 4. Upstream face of culverts at Boone Road



Figure 5. Looking downstream of Boone Road





5.0 Initial Screening Study

During Phase 1, an Initial Screening Study was performed for the Hurricane Creek basin. For this screening, a hydraulic model was developed for the entire basin using 2D HEC-RAS and utilized rain-on-grid methodology to apply precipitation directly to the ground surface. This model was used to identify flood issues throughout the City, so is considered a qualitative model and not to be used for design. However, the data is useful in determining relative flood risk, and a flood severity index (FSI) was developed using the model results. Flood severity ranges from 0 to 4, with 4 being the most severe. The FSI classifications are listed in **Table 1**. **Table 2** displays the FSI rankings for Boswell Creek.

Table 1. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|-----------------------------------|--|
| FS0 | Minimal severity | < 0.5 | |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |

Because of the high likelihood of flooding at multiple storm events, and historical flood issues in the area, Boone Road at Boswell Creek was selected for further hydraulic study in order to identify conceptual drainage improvements.





Table 2. Flood Severity Index for Boone Road at Boswell Creek

| | | | Potential | Flood Severity Index | | | | |
|------------|------------------|--------------------|--|----------------------------|-------|-------|--------|--|
| Location | Stream Name | Basin | Drainage Issue | 5 yr | 10 yr | 50 yr | 100 yr | |
| Boone Road | Boswell Creek | Hurricane Creek | Roadway overtopping; home flooding | 1 | 1 | 2 | 2 | |

6.0 Hydrology

In Phase 1 of the CDMP, an Effective hydrologic model of the Hurricane Creek basin was updated using HEC-HMS 4.10. Boswell Creek was included as a subbasin of Hurricane Creek. Calculated flow rates were compared to the Effective FIS flows. The Effective flows were slightly higher for published events. For this project, the Effective FIS flows were used for all storm events 10-year and greater; the HEC-HMS flows were utilized for the 2- and 5-year events, as these were not published in the FIS.

The determined flow rates for Boswell Creek are provided in Table 3.

Table 3. Summary of Discharges for Boswell Creek

| Location along | Drainage | Flow Rate (cfs) | | | | | | | | |
|--|-----------------|-----------------|------|-------|-------|-------|------------|--------|--|--|
| Stream | Area (sq mi) | 2-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100- yr | 500-yr | | |
| Approx. 200 feet downstream of Boone Road | 0.40 | 250 | 340 | 417 | 530 | 625 | 720 | 851 | | |
| Just upstream of confluence with Hurricane Creek | 0.77 | 439 | 595 | 729 | 942 | 1,116 | 1,289 | 1,522 | | |





7.0 Hydraulics

The hydraulic analysis was performed using HEC-RAS version 6.3.1. The Effective model received from FEMA was utilized and updated as needed.

The 2-, 5-, 10-, 25-, 50-, 100-, and 500-year flows discussed above were used in the model. The downstream boundary condition was set to a normal depth slope of 0.0056 ft/ft. The slope was determined based on the average slope of the thalweg in the downstream portion of the modeled reach.

7.1 Duplicate Effective Model

The received Effective model was brought into HEC-RAS v6.3.1 and run as the Duplicate Effective Model (DEM).

7.2 Corrected Effective Model

The Effective FEMA model was utilized and updated in order to represent the current conditions of the project area. Parameters such as reach lengths, ineffective area settings, and bank stations were updated were necessary. Existing conditions structure data for the Boone Road are given in **Table 4**.

 Parameter
 Value

 Culvert Size & Type
 3-2.5' RCP

 Upstream Invert Elevation
 367.5

 Downstream Invert Elevation
 367.18

 Box Length
 31

 Open Flow Area
 14.73 sq. ft

Table 4. Existing Conditions Structure Data at Boone Road

In existing conditions, the structure overtops during all modeled flood events (2-year through 500-year).

7.3 Proposed Conditions

Based on the existing conditions results, drainage improvements were iterated to upsize these culverts as well as improve the flow capacity of the stream channel. After multiple iterations, a design was developed to convey the 10-year event storm without overtopping roadways. Boone Road is a minor arterial and should be able to pass a 50-





year event. However, there is no feasible solution for passing the 50-year event without significant redesign of Boone Road. As the current culvert will not pass the 2-year without overtopping, the 10-year design will significantly improve the drainage at this site. The proposed structure data is provided in **Table 5**.

Table 5. Proposed Structure Data at Boone Road

| Parameter | Value |
|-----------------------------|-------------|
| Culvert Size & Type | 3-6'x3' RCB |
| Upstream Invert Elevation | 367.5 |
| Downstream Invert Elevation | 367.18 |
| Box Length | 31 |
| Open Flow Area | 54 sq. ft |

In addition to the upsized culvert under Boone Road, channel improvements were recommended. This would include a concrete trapezoidal channel with a 20ft channel bottom and 3:1 side slopes. Channelization is recommended from approximately 20 upstream of Boone Road to approximately 200 feet downstream. A comparison of the existing and proposed water surface elevations during the 50-year event is given in **Table 6**, as the 50-year event is the design event for a minor arterial. The model layout and floodplain boundaries are shown in **Figure 6**.

Table 6. Comparison of Existing and Proposed WSELs for 50-year event

| Model Cross Section | Existing Conditions WSEL (ft NAVD88) | Proposed Conditions WSEL (ft NAVD88) | Difference in WSEL (ft) |
|------------------------|--|--|----------------------------|
| 5335 | 383.10 | 383.43 | 0.33 |
| 5144 | 382.98 | 383.34 | 0.36 |
| 5122 | | Boswell Road | |
| 5105 | 382.87 | 382.87 | 0.00 |
| 5010 | 382.81 | 382.81 | 0.00 |
| 4949 | 382.43 | 382.43 | 0.00 |
| 4926 | | N. Richardson Place | |
| 4887 | 380.03 | 380.03 | 0.00 |
| 4720 | 376.97 | 376.97 | 0.00 |
| 4378 | 375.10 | 375.10 | 0.00 |
| 4072 | 374.46 | 374.46 | 0.00 |





| Model Cross Section | Existing Conditions WSEL (ft NAVD88) | Proposed Conditions WSEL (ft NAVD88) | Difference in WSEL (ft) |
|------------------------|--|--|----------------------------|
| 4009 | 374.10 | 374.10 | 0.00 |
| 3984 | | S. Richardson Place | |
| 3951 | 372.58 | 372.58 | 0.00 |
| 3912 | 371.76 | 371.41 | -0.35 |
| 3810 | 371.46 | 370.68 | -0.78 |
| 3788 | | Boone Road | |
| 3758 | 370.69 | 370.11 | -0.58 |
| 3692 | 369.91 | 369.37 | -0.54 |
| 3564 | N/A | 369.39 | N/A |
| 3476 | 369.53 | 369.53 | 0.00 |
| 3274 | 368.03 | 368.03 | 0.00 |
| 3078 | 366.70 | 366.70 | 0.00 |
| 2553 | 363.83 | 363.83 | 0.00 |
| 2471 | 363.10 | 363.10 | 0.00 |
| 2384 | 362.72 | 362.72 | 0.00 |
| 2383 | | Inl Struct | |
| 2105 | 359.91 | 359.91 | 0.00 |
| 1689 | 356.83 | 356.83 | 0.00 |
| 1595 | 356.36 | 356.36 | 0.00 |
| 1584 | | Pedestrian Bridge | |
| 1563 | 355.77 | 355.77 | 0.00 |
| 1480 | 354.86 | 354.86 | 0.00 |
| 1464 | | Pedestrian Bridge | |
| 1450 | 354.91 | 354.91 | 0.00 |
| 1202 | 352.97 | 352.97 | 0.00 |
| 1194 | | Pedestrian Bridge | |
| 1173 | 352.47 | 352.47 | 0.00 |
| 808 | 351.23 | 351.23 | 0.00 |
| 160 | 349.27 | 349.27 | 0.00 |

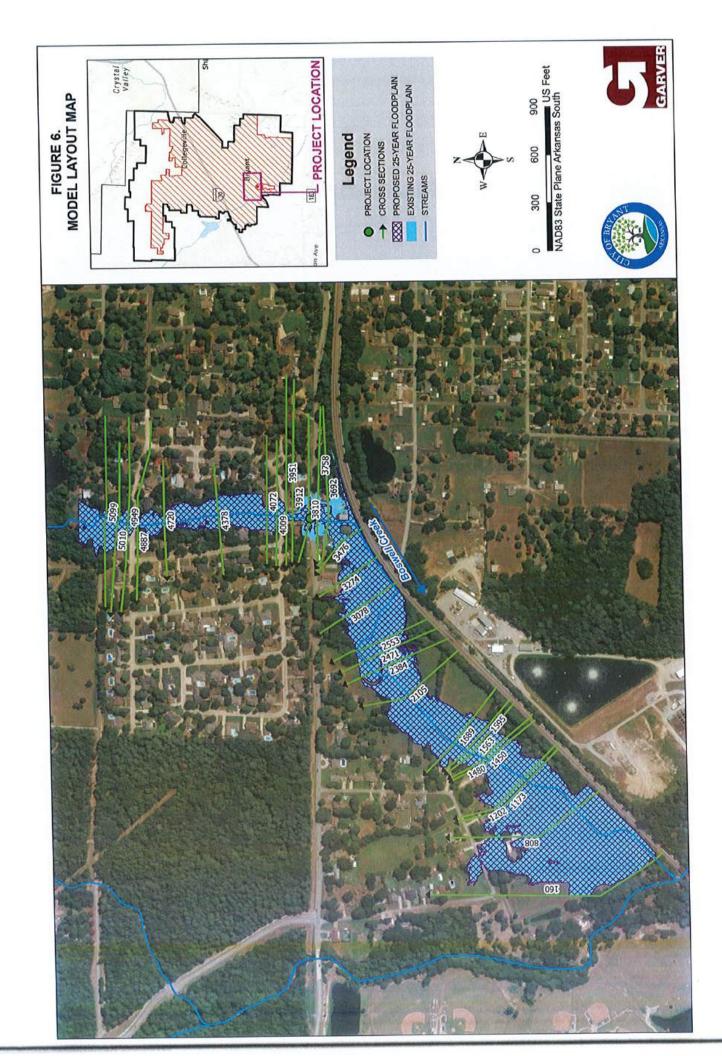




8.0 Conceptual Layout and Planning Level Opinion of Project Costs

A conceptual layout drawing and planning level opinion of project costs are provided in Appendix B-1. This layout is for graphical and planning purposes only and is not for construction.





Appendix B-1

Phase 2 Boone Road at Boswell Creek Improvements Conceptual Layout and Planning Level Opinion of Project Costs





| Planning Level Opini Boone Road at Boswell | | | ts | | |
|---|---------|----------|----|-----------|------------------|
| Item Description | Unit | Quantity | | Unit Cost | Total Cost |
| Unclassified Excavation | C.Y. | 480 | \$ | 30.00 | \$ 14,400.00 |
| Aggregate Base Course (Class 7) | TON | 34 | \$ | 50.00 | \$ 1,700.00 |
| Concrete Ditch Paving | S.Y. | 920 | \$ | 75.00 | \$ 69,000.00 |
| Quintuple 6' x 3' Reinforced Concrete Box Culvert (31') | S.F. | 930 | \$ | 185.00 | \$ 172,050.00 |
| Asphalt Pavement Repair | S.Y. | 73 | \$ | 200.00 | \$ 14,600.00 |
| Site Preparation (10%) | L.S. | 1 | \$ | 40,175.00 | \$ 40,175.00 |
| Traffic Control (1%) | L.S. | 1 | \$ | 4,046.00 | \$ 4,046.00 |
| Erosion Control (3%) | L.S. | 1 | \$ | 12,145.00 | \$ 12,145.00 |
| Contingency (20%) | L.S. | 1 | \$ | 81,088.00 | \$ 81,088.00 |
| Total Estimated Construction | on Cost | | | | \$ 409,204.00 |
| Additional Associated Costs | | | | | |
| Utility Relocation (10%) | L.S. | 1 | \$ | 40,920.00 | \$ 40,920.00 |
| Engineering and Survey Fee (18%) | L.S. | 1 | \$ | 73,657.00 | \$ 73,657.00 |
| RW Acquisition and Easements (2%) | L.S. | 1 | \$ | 8,184.00 | \$ 8,184.00 |
| Total Estimated Project (| Cost | | | | \$ 532,000.00 |

Appendix C

Phase 2

Cynamide Road at Hurricane Creek Improvements

Comprehensive Drainage Master Plan City of Bryant

Phase 2

Cynamide Road at Hurricane Creek Improvements

Prepared by:



4701 Northshore Drive North Little Rock, Arkansas 72118

January 2025

Garver Project No.: 20T20090



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Overall Project Description 1.0

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- Identify current and future drainage problems;
- Generate proposed solutions to identified problems;
- Develop a Capital Improvement Plan (CIP); and
- Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. Figure 1 shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

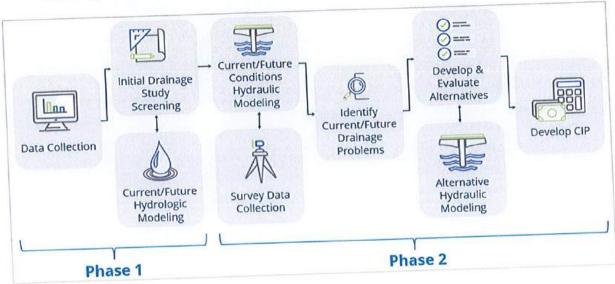


Figure 1. CDMP Project Process

This report discusses the processes and findings of a Phase 2 study for Cynamide Road at Hurricane Creek.





2.0 **General Information**

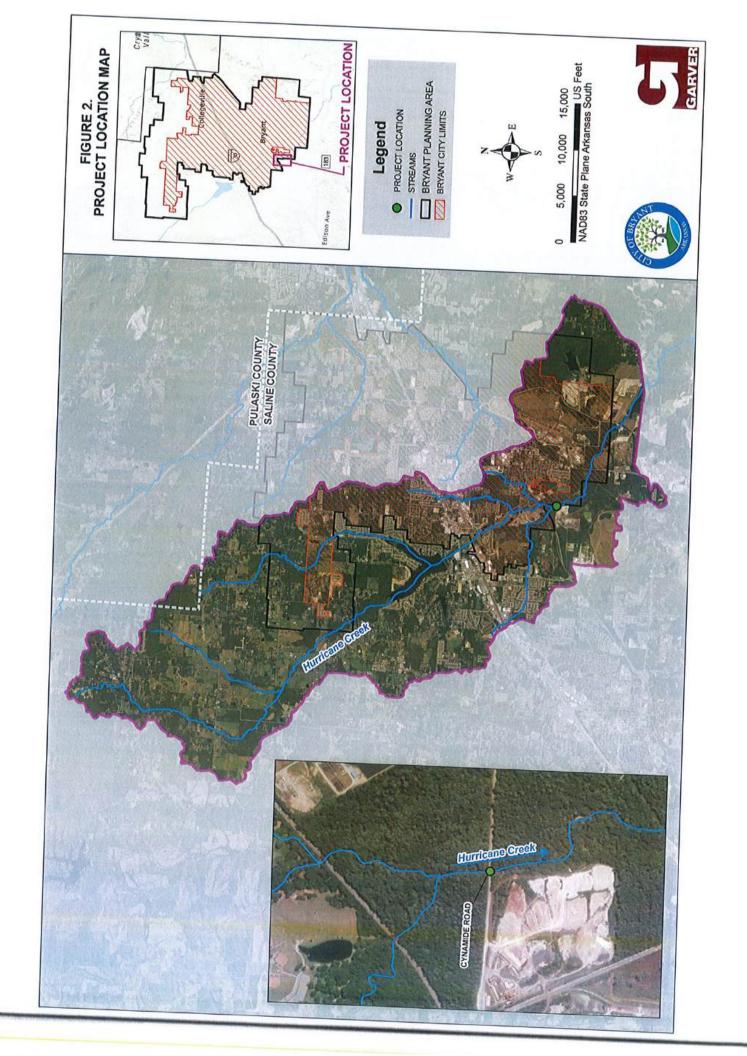
Cynamide Road is a minor arterial class roadway connecting Alcoa Boulevard to South Reynolds Road, with a box culvert crossing over Hurricane Creek. The project location map is shown in Figure 2.

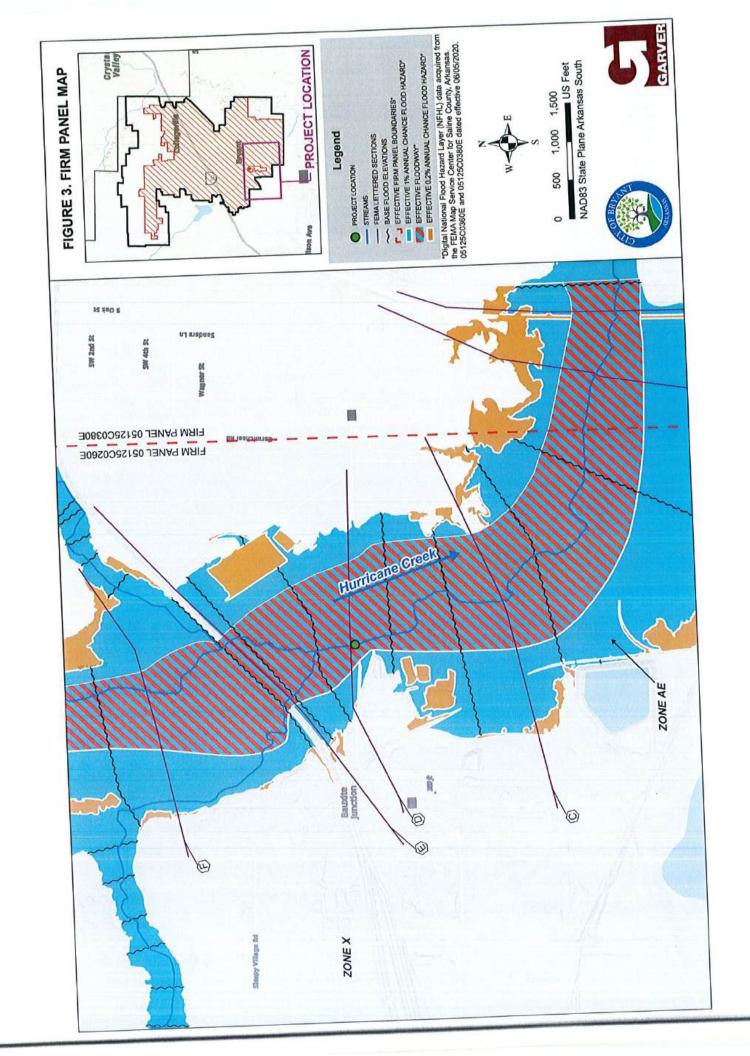
3.0 National Flood Insurance Program (NFIP) Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0360E, 0370E, and 0380E. The Cynamide Road crossing is within Panel 0360E.

Hurricane Creek is mapped as Zone AE with floodway. The Effective floodplain mapping for the project area is shown in Figure 3.









4.0 Data Collection

4.1 GIS and Topographic Data

For this project, 1-meter Digital Elevation Model (DEM) lidar topography from USGS Ouachita study was acquired from the Arkansas GIS Office. No survey was collected for this location. Structure data included in the Effective hydraulic model for Hurricane Creek was used. Garver conducted a site visit to the location to confirm structure information. The Cynamide Road crossing is shown in **Figure 4**.

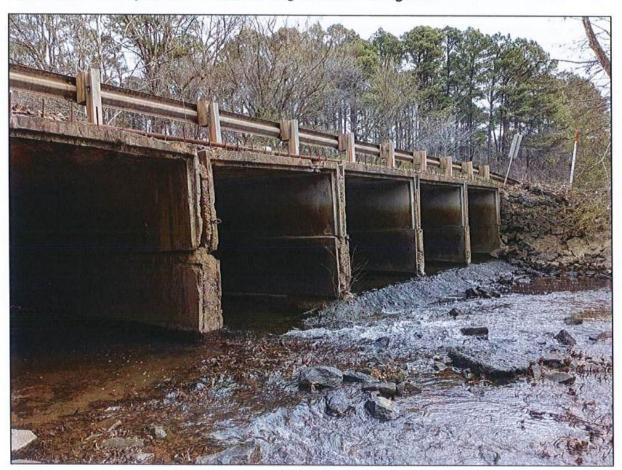


Figure 4. Cynamide Road at Hurricane Creek





4.2 Resident Comment Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received for the city planning area. 119 comments were within the Hurricane Creek drainage Basin. Zero resident comments were made for Hurricane Creek near the project area for Cynamide Road.

5.0 Initial Screening Study

During Phase 1, an Initial Screening Study was performed for the Hurricane Creek Basin. For this screening, a hydraulic model was developed for the entire basin using 2D HEC-RAS and utilized rain-on-grid methodology to apply precipitation directly to the ground surface. This model was used to identify flood issues throughout the City, so is considered a qualitative model and not to be used for design. However, the data is useful in determining relative flood risk, and a flood severity index (FSI) was developed using the model results. Flood severity ranges from 0 to 4, with 4 being the most severe. The FSI classifications are listed in **Table 1**. **Table 2** displays the FSI rankings for Cynamide Road.

Table 1. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|--------------------------------|-------------------------------------|
| FS0 | Minimal severity | < 0.5 | |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |





Table 2. Flood Severity Index for Cynamide Road

| | | | Potential | Flood Severi Index | | | ty |
|------------------|-----------------|--------------------|---------------------|--------------------------|-------|-------|--------|
| Location | Stream Name | Basin | Drainage Issue | 5 vr | 10 vr | 50 vr | 100 vr |
| Cynamide Road | Hurricane Creek | Hurricane Creek | Roadway overtopping | 0 | 2 | 2 | 3 |

Because of the high likelihood of flooding at multiple storm events, Cynamide Road was selected for further hydraulic study in order to identify conceptual drainage improvements.

6.0 Hydrology

In Phase 1 of the CDMP, a hydrologic model of the Hurricane Creek basin was created using HEC-HMS 4.10. Flows determined in the updated Garver model were compared to Effective flows used in the Effective hydraulic model, the updated flows were within 1.4% on average, with a maximum difference of 5.3%. Differences in values are considered acceptable. HEC-HMS flow rates were used in the design hydraulic model.

The determined flow rates are provided in Table 3.

Table 3. Summary of Discharges for Hurricane Creek

| Location along | Drainag | Flow Rate (cfs) | | | | | | | |
|---|-------------------|-----------------|-------|--------|--------|--------|--------|--------|--|
| Location along Stream | e Area (sq mi) | 2-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr | 500-yr | |
| Upstream of I-30 | 28.05 | 5,748 | 8,317 | 10,410 | 13,967 | 16,681 | 19,494 | 26,550 | |
| Immediately upstream of Boone Rd | 30.88 | 5,682 | 8,343 | 10,567 | 13,995 | 16,773 | 19,762 | 27,051 | |
| Immediately upstream of Cynamide Rd | 34.55 | 5,881 | 8,642 | 10,926 | 14,724 | 17,687 | 20,812 | 28,511 | |
| Immediately upstream of Highway 183 | 36.83 | 5,698 | 8,455 | 10,827 | 14,825 | 17,951 | 21,256 | 29,353 | |





7.0 Hydraulics

The hydraulic analysis was performed using HEC-RAS version 6.3.1. the Effective model received from FEMA was utilized and updated as needed.

The 2-, 5-, 10-, 25-, 50-, 100-, and 500-year flows obtained from the HEC-HMS model discussed above were used in the models. The downstream boundary condition was set to a normal depth slope of 0.00049 ft/ft. The slope was determined based on the average slope of the thalweg in the downstream portion of the modeled reach.

7.1 Duplicate Effective Model

The received Effective model was brought into HEC-RAS v6.3.1 and run as the Duplicate Effective Model (DEM).

7.2 Existing Conditions

The Effective FEMA model was utilized and updated in order to represent the current conditions of the project area. Parameters such as reach lengths, ineffective area settings, and bank stations were updated were necessary. Parameters for the existing structure at Cyanamide Road is given in **Table 4**.

Table 4. Existing Cynamide Road Structure Data (from Effective FIS Model)

| Parameter | Value | |
|---------------------------------------|------------------|--|
| Culvert Size | 6- 10x8 RCB | |
| Upstream Invert Elevation | 336.84 ft NAVD88 | |
| Downstream Invert Elevation | 336.82 ft NAVD88 | |
| Culvert Length | 36 feet | |
| Minimum Top of Road within Floodplain | 346.23 ft NAVD88 | |
| Open Flow Area | 480 sq. ft | |

In existing conditions, the structure overtops during all modeled flood events (2-year through 500-year).

7.3 Proposed Conditions

Based on the existing conditions results, drainage improvements were iterated to increase the open flow area by replacing the existing culvert structure with a bridge.





After multiple iterations, a design was developed to convey the 25-year event storm without overtopping the roadway. Parameters for the proposed bridge updates are provided in **Table 5**.

Table 5. Proposed Cynamide Road Structure Data

| Parameter | Value | |
|---------------------------------------|-----------------------------|--|
| Bridge Configuration | 700 foot bridge (spans TBD) | |
| Pier Type and Size | To be determined | |
| Abutment Type | To be determined | |
| Minimum Top of Road within Floodplain | 347.3 ft NAVD88 | |
| Open Flow Area | 2,583 sq. ft | |

A comparison of existing and proposed water surface elevations during the 25-year event is given in **Table 6**. The existing and proposed floodplain boundaries are shown in **Figure 7**.

Table 6. Comparison of Existing and Proposed WSELs for 25-year event

| Model Cross Section | Existing Conditions WSEL (ft NAVD88) | Proposed Conditions WSEL (ft NAVD88) | Difference in WSEL (ft) |
|------------------------|--|--|----------------------------|
| 333871 | 355.21 | 355.21 | 0.00 |
| 333812 | | Bridge | |
| 333713 | 351.04 | 350.97 | -0.07 |
| 332978 | 350.01 | 349.86 | -0.15 |
| 332497 | 349.13 | 348.72 | -0.41 |
| 332034 | 348.62 | 347.98 | -0.64 |
| 331979 | 348.34 | 347.64 | -0.70 |
| 331922 | | Cynamide Road | |
| 331852 | 346.33 | 346.32 | -0.01 |
| 331715 | 346.07 | 346.06 | -0.01 |
| 331172 | 345.06 | 345.06 | 0.00 |
| 330046 | 343.77 | 343.77 | 0.00 |
| 329418 | 342.95 | 342.95 | 0.00 |
| 328479 | 342.25 | 342.25 | 0.00 |
| 327262 | 341.55 | 341.55 | 0.00 |
| 326159 | 341 | 341 | 0.00 |



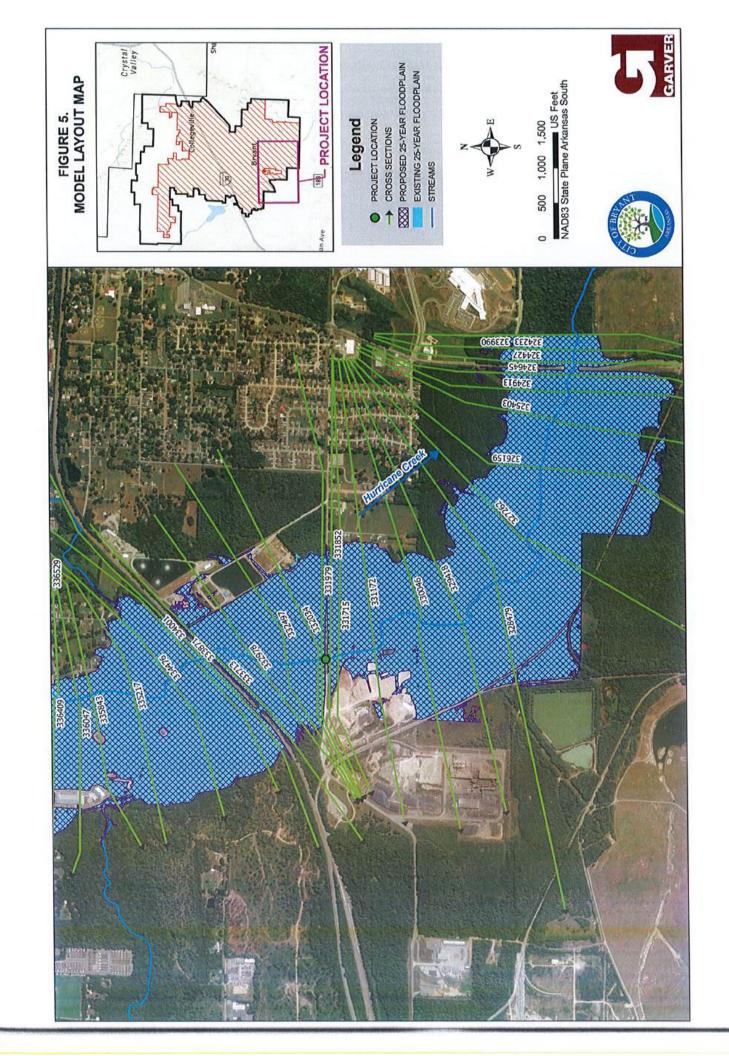


| Model Cross Section | Existing Conditions WSEL (ft NAVD88) | Proposed Conditions WSEL (ft NAVD88) | Difference in WSEL (ft) |
|------------------------|--|--|----------------------------|
| 325403 | 340.79 | 340.79 | 0.00 |
| 324913 | 340.54 | 340.54 | 0.00 |
| 324645 | 340.15 | 340.15 | 0.00 |
| 324531 | | Bridge | |
| 324427 | 338.9 | 338.9 | 0.00 |
| 324233 | 338.95 | 338.95 | 0.00 |
| 323990 | 338.85 | 338.85 | 0.00 |

8.0 Conceptual Layout and Planning Level Opinion of Project Costs

A conceptual layout drawing and planning level opinion of project costs are provided in Appendix C-1. This layout is for graphical and planning purposes only and is not for construction.





Appendix C-1

Phase 2 Cynamide Road at Hurricane Creek Improvements Conceptual Layout and Planning Level Opinion of Project Costs





| Planning Cynamide Roa | and the state of t | nion of Proje ane Creek I | | |
|-------------------------------------|--|------------------------------|-----------------|------------------|
| Item Description | Unit | Quantity | Unit Cost | Total Cost |
| Roadway Construction | Mile | 0.34 | \$ 5,000,000.00 | \$ 1,700,000.00 |
| Hurricane Creek Bridge (28' x 700') | S.F. | 19600 | \$ 340.00 | \$ 6,664,000.00 |
| Site Preparation (10%) | L.S. | 1 | \$ 1,236,512.00 | \$ 1,236,512.00 |
| Traffic Control (1%) | L.S. | 1 | \$ 124,531.00 | \$ 124,531.00 |
| Erosion Control (3%) | L.S. | 1 | \$ 373,789.00 | \$ 373,789.00 |
| Contingency (20%) | L.S. | 1 | \$ 2,295,745.00 | \$ 2,295,745.00 |
| Total Estimated C | onstructio | n Cost | | \$ 12,394,577.00 |
| Additional Associated Costs | | | | |
| Utility Relocation (10%) | L.S. | 1 | \$ 1,239,458.00 | \$ 1,239,458.00 |
| Engineering and Survey Fee (18%) | L.S. | 1 | \$ 2,231,024.00 | \$ 2,231,024.00 |
| RW Acquisition and Easements (2%) | L.S. | 1 | \$ 247,892.00 | \$ 247,892.00 |
| Total Estimate | d Project C | ost | | \$ 16,113,000.00 |

Appendix D

Phase 2

Hidden Forest Subdivision Improvements

Comprehensive Drainage Master Plan City of Bryant

Phase 2 Hidden Forest Subdivision Improvements

Prepared by:



4701 Northshore Drive North Little Rock, Arkansas 72118

January 2025 Garver Project No.: 20T20090



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1.0 Overall Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- · Identify current and future drainage problems;
- · Generate proposed solutions to identified problems;
- · Develop a Capital Improvement Plan (CIP); and
- · Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

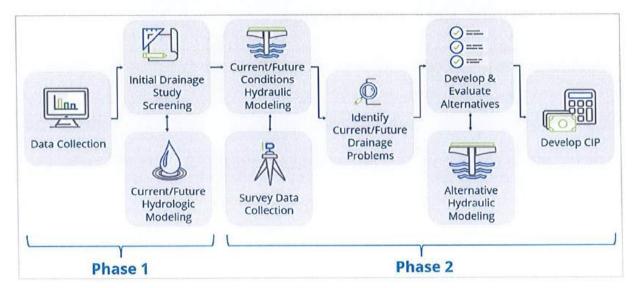


Figure 1. CDMP Project Process

This report discusses the processes and findings of a Phase 2 study within the Hidden Forest Subdivision.





2.0 General Subdivision Information

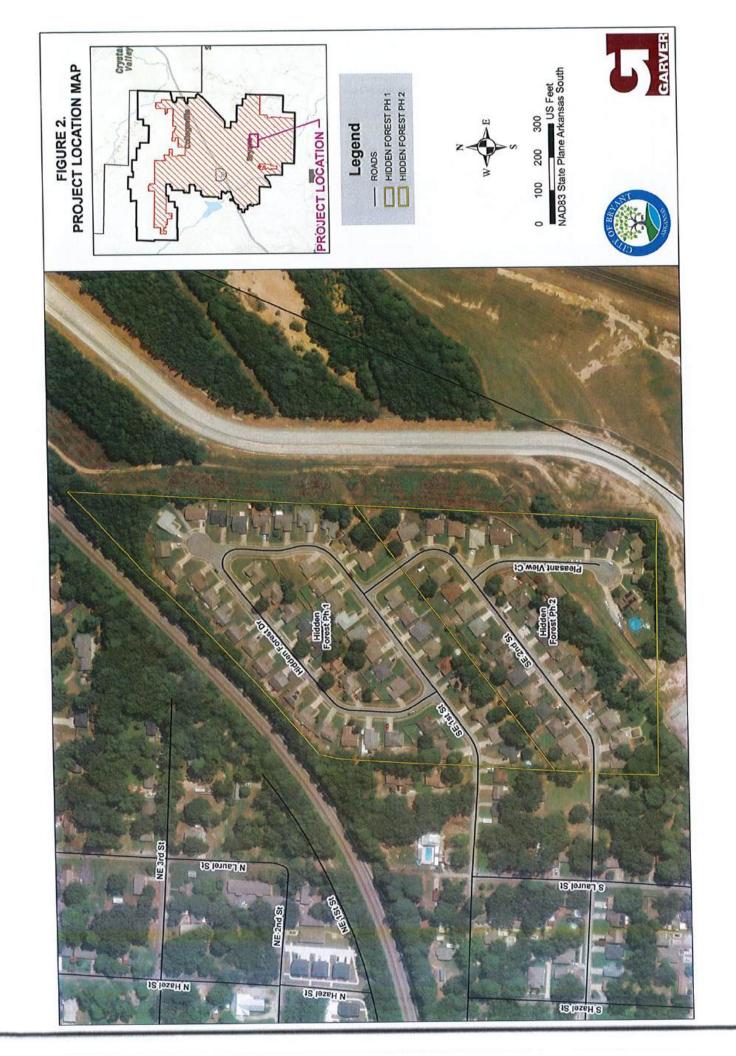
The Hidden Forest subdivision is located within the Crooked Creek drainage basin. The subdivision is located just south of the Union Pacific Railroad and alongside the newly completed Bryant Parkway. The subdivision was constructed in the early 2000's, showing complete as of December 2005 according to Google Earth Historical Imagery. A project location map is shown in **Figure 2**.

3.0 National Flood Insurance Program (NFIP) Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0360E, 0370E, and 0380E. The Hidden Forest subdivision is entirely within Panel 0380E.

The Hidden Forest Subdivision is located within Zone X. The Effective floodplain mapping for the project area is shown in **Figure 3**.









4.0 Data Collection

4.1 Historical Records of Drainage and Flooding

4.1.1 City and Public News Records

The City has received many complaints concerning drainage within the Hidden Forest Subdivision, including issues with drainage ditches that are located behind homes, as well as some street flooding. Some of these locations are shown in photographs in Figures 5 and 6.

4.1.2 Resident Comment Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received for the city planning area. Two comments were within the Hidden Forest subdivision project area.

The known flood areas and resident comment locations are provided on Figure 4.



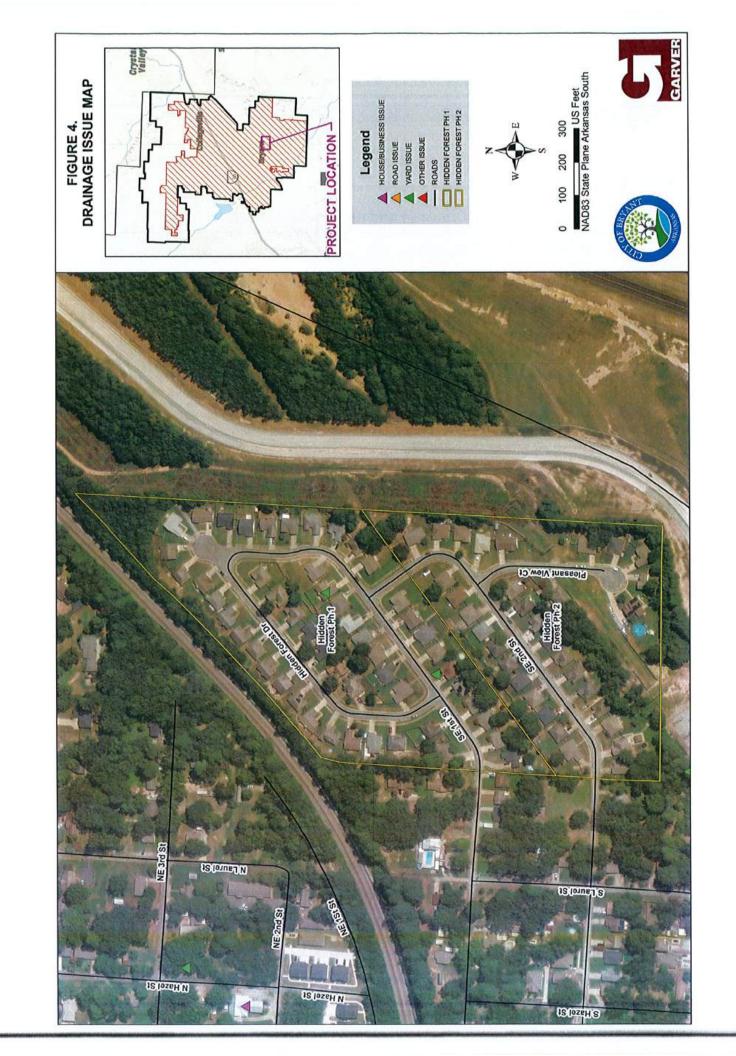






Figure 5. Drainage Ditch between SE 1st Street and Hidden Forest Drive



Figure 6. Cove at intersection of SE 1st Street and Hidden Forest Drive





4.2 As-built Plans and Data for Existing Infrastructure

The City provided as-built plans for Phases 1, and 2 of the Hidden Forest subdivision. This data was utilized to identify the existing stormwater network location and sizing.

4.3 GIS and Topographic Data

GIS data was collected for the CDMP and utilized for the Hidden Forest subdivision study. Collected data included city and planning area limits, stormwater points and flowlines, subdivision boundaries, NFHL data, land use data, and topographic data.

For this project, 1-meter Digital Elevation Model (DEM) lidar topography from USGS Ouachita study was acquired from the Arkansas GIS Office. Additionally, Garnat collected drainage structure survey throughout the subdivision.

5.0 Initial Screening Study

During Phase 1, an Initial Screening Study was performed for the Crooked Creek basin. For this screening, a hydraulic model was developed for the entire basin using 2D HEC-RAS and utilized rain-on-grid methodology to apply precipitation directly to the ground surface. This model was used to identify flood issues throughout the City, so is considered a qualitative model and not to be used for design. However, the data is useful in determining relative flood risk, and a flood severity index (FSI) was developed using the model results. Flood severity ranges from 0 to 4, with 4 being the most severe. The FSI classifications are listed in **Table 1**. **Table 2** displays the FSI rankings for the Hidden Forest Subdivision.





Table 1. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|-----------------------------------|--|
| FS0 | Minimal severity | < 0.5 | |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |

Table 2. Flood Severity Index For Hidden Forest Subdivision

| Lacation | Ct. N | | Potential Drainage | Flood Severity Index | | | | |
|------------------------------|-------------|------------------|--|----------------------------|-------|-------|--------|--|
| Location | Stream Name | Basin | Issue | 5 yr | 10 yr | 50 yr | 100 yr | |
| Hidden Forest Subdivision | N/A | Crooked Creek | Neighborhood flooding; home flooding | 1 | 1 | 1 | 1 | |

Because of the high likelihood of flooding at multiple storm events, and historical flood issues in the area, the Hidden Forest subdivision was selected for further hydraulic study in order to identify conceptual drainage improvements.





6.0 XPSWMM Hydraulic Model

6.1 Existing Conditions Model

The Existing Conditions model was developed to represent the current conditions of the project area at the time the project modeling was performed. Details are given in the following sections.

6.1.1 Model Hydrology

The XPSWMM model utilizes rain-on-grid precipitation data to represent the flow within the model limits. This modeling approach used an excess precipitation hyetograph input as a distributed inflow boundary condition for the 2D model mesh. The excess precipitation hyetograph represents the precipitation that is converted to runoff from the watershed; i.e., the precipitation that is not infiltrated, evaporated, stored, or otherwise consumed by environmental features.

HEC-HMS v. 4.12 software was used to transform the precipitation hyetograph to the excess precipitation hyetograph for application of the rain-on-mesh methodology. The land use and soil characteristics of the area were used to develop a composite Natural Resources Conservation Service (NRCS, formerly Soil Conservation Service, SCS) curve number for the drainage area. Since the excess precipitation hyetograph is required for input to the rain-on-mesh 2D hydraulic model, the NRCS curve number is the only required hydrologic parameter in the HEC-HMS model.

Atlas 14 data was utilized to determine the point-precipitation hyetograph for each hypothetical frequency storm simulated in the HEC-HMS program. The HEC-HMS program output provided the excess precipitation hyetograph for each of the flow frequencies modeled for this project.

6.1.2 Existing Conditions Model Geometry

The downstream boundary condition was set to normal depth slope at the downstream end of the model. The DTM for the 2D model was built from the lidar data, project survey, and design plans for newer constructed areas not reflected in the lidar. The Manning's n layer was set based on land use. The rainfall layer was set to the same extents as the grid layer and set to use a SCS Type III rainfall distribution with a





cumulative depth equal to the 24-hour NOAA Atlas 14 precipitation depth for the corresponding storm interval.

The 1D elements were compared to the survey data and updated as needed. The conduit and junction shapefiles included in the model accurately represented the elevations and lengths in the received survey, with few assumptions regarding connections. Channels were added as 1D elements using surveyed cross sections. The existing stormwater system is displayed in Figure 10.

The model was set to run for 24 hours at a 1-minute time step. This run time allowed for the outflow hydrograph to reach its peak and for the falling limb to dissipate.

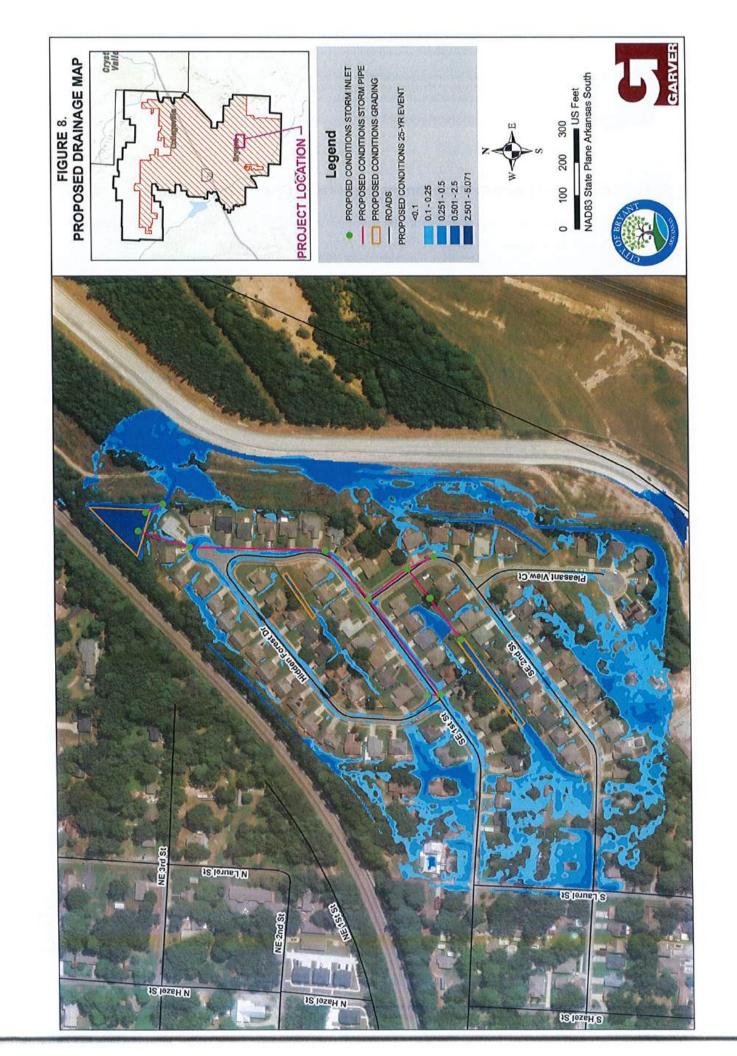
6.2 Proposed Conditions Model Geometry

The existing conditions model results was reviewed and problem areas within the subdivision were identified. After discussions with the City, specific locations within the Hidden Forest subdivision were selected for proposed alternative development. The proposed alternatives were developed in order to meet a 25-year design event. Model geometry was updated for proposed conditions to reflect any updated pipe sizes, inlet sizes and locations, and grading. The proposed design is shown in Figure 8.

In order to improve flood conditions in the Hidden Forest subdivision, drainage improvements along the Northeastern section of the neighborhood are recommended. This includes the installation of additional stormwater drainage along SE 1ST Street and SE 2nd Street as well as regrading the drainage ditches throughout the Phase 1 section of neighborhood. It is also recommended to regrade the detention pond that sits in the Northeastern corner of the neighborhood.









7.0 Conceptual Layout and Planning Level Opinion of Project Costs

A conceptual layout drawing and planning level opinion of project costs are provided in Appendix D-1. This layout is for graphical and planning purposes only and is not for construction.



Appendix D-1

Phase 2 Hidden Forest Subdivision Improvements Conceptual Layout and Planning Level Opinion of Project Costs





| Planning Level O Hidden Forest Sul | • | | | |
|---|----------|----------|------------------|--------------------|
| Item Description | Unit | Quantity | Unit Cost | Total Cost |
| Unclassified Excavation | C.Y. | 374 | \$ 30.00 | \$ 11,220.00 |
| 18" Reinforced Concrete Pipe Culvert, Class III | L.F. | 450 | \$ 114.00 | \$ 51,300.00 |
| 24" Reinforced Concrete Pipe Culvert, Class III | L.F. | 60 | \$ 146.00 | \$ 8,760.00 |
| 36" Reinforced Concrete Pipe Culvert, Class III | L.F. | 1045 | \$ 252.00 | \$ 263,340.00 |
| 48" Reinforced Concrete Pipe Culvert, Class III | L.F. | 160 | \$ 380.00 | \$ 60,800.00 |
| Drop Inlets | Each | 6 | \$ 9,000.00 | \$ 54,000.00 |
| Area Inlets | Each | 3 | \$ 9,000.00 | \$ 27,000.00 |
| Junction Box (Type E) | Each | 4 | \$ 8,000.00 | \$ 32,000.00 |
| Concrete Headwall (36") | Each | 1 | \$ 5,000.00 | \$ 5,000.00 |
| Driveway Pavement Repair | S.Y. | 99 | \$ 140.00 | \$ 13,860.00 |
| Asphalt Pavement Repair | S.Y. | 130 | \$ 200.00 | \$ 26,000.00 |
| Pipe Embedment | C.Y. | 335 | \$ 60.00 | \$ 20,100.00 |
| Site Preparation (10%) | L.S. | 1 | \$ 84,767.00 | \$ 84,767.00 |
| Traffic Control (1%) | L.S. | 1 | \$ 8,537.00 | \$ 8,537.00 |
| Erosion Control (3%) | L.S. | 1 | \$ 25,624.00 | \$ 25,624.00 |
| Contingency (20%) | L.S. | 1 | \$ 171,091.00 | \$ 171,091.00 |
| Total Estimated Constr | uction C | ost | | \$ 863,399.00 |
| Additional Associated Costs | | | | |
| Utility Relocation (10%) | L.S. | 1 | \$ 86,340.00 | \$ 86,340.00 |
| Engineering and Survey Fee (18%) | L.S. | 1 | \$ 155,412.00 | \$ 155,412.00 |
| RW Acquisition and Easements (2%) | L.S. | 1 | \$ 17,268.00 | \$ 17,268.00 |
| Total Estimated Proj | ect Cost | | | \$ 1,122,400.00 |

Appendix E

Phase 2

Meadow Lake Subdivision Improvements

Comprehensive Drainage Master Plan City of Bryant

Phase 2 Meadow Lake Subdivision Improvements

Prepared by:



4701 Northshore Drive North Little Rock, Arkansas 72118

January 2025

Garver Project No.: 20T20090



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1.0 Overall Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- Identify current and future drainage problems;
- · Generate proposed solutions to identified problems;
- Develop a Capital Improvement Plan (CIP); and
- · Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

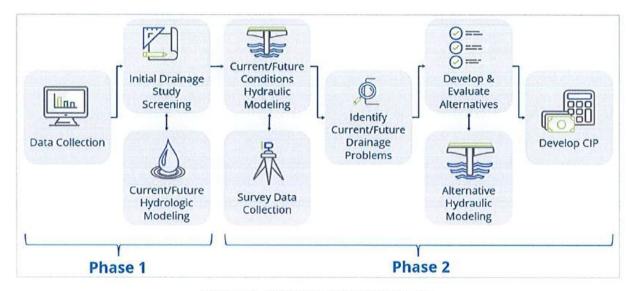


Figure 1. CDMP Project Process

This report discusses the processes and findings of a Phase 2 study within the Meadow Lake Subdivision.





2.0 General Subdivision Information

The Meadowlake subdivision is located within the Crooked Creek drainage basin. The subdivision located within the east-central region of the city planning boundary. The subdivision was constructed in 7 phases, Phases 1 through 6 and Phase 8. Construction of the subdivision began in the late 1990's, with all phases constructed by 2009, according to Google Earth Historic Imagery. A project location map is shown in Figure 2.

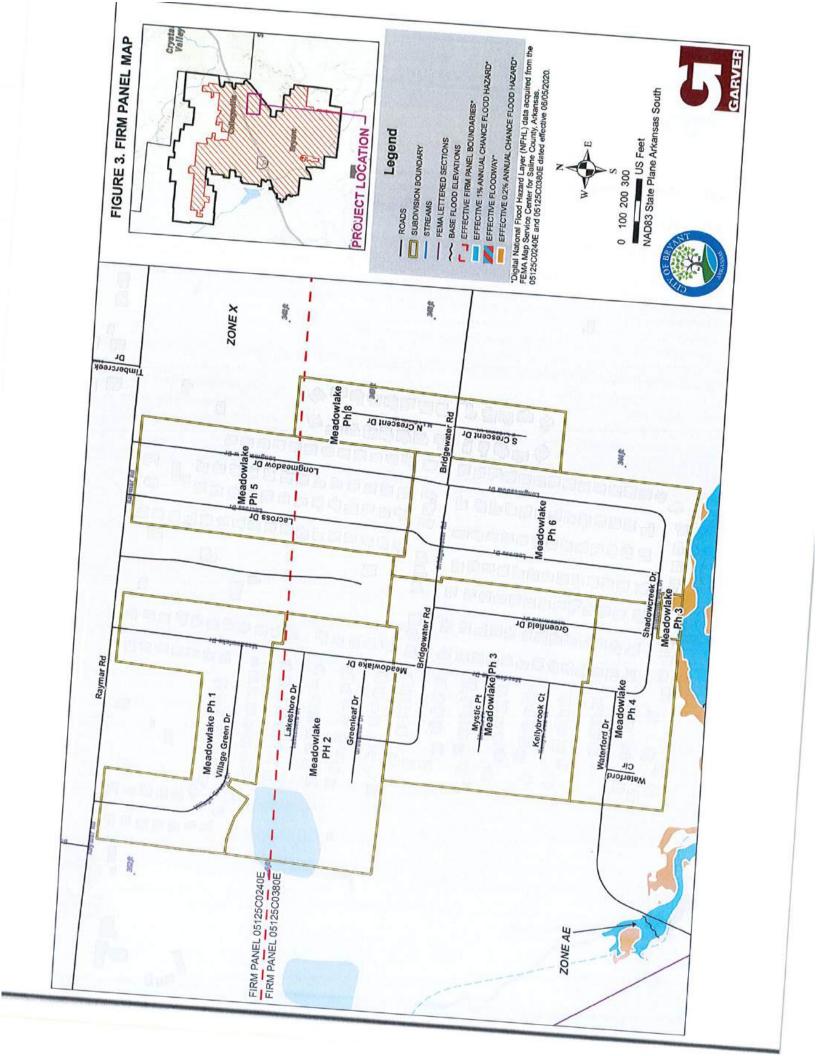
3.0 National Flood Insurance Program (NFIP) Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0360E, 0370E, and 0380E. The Meadowlake subdivision is located within Panel 0240E and Panel 0380E.

Crooked Creek is mapped as Zone AE with floodway. However, the Meadowlake subdivision is located within Zone X. An unnamed tributary to Crooked Creek flows just south of the subdivision; a portion of it is mapped as backwater Zone AE from Crooked Creek The Effective floodplain mapping for the project area is shown in Figure 3.









Data Collection 4.0

Historical Records of Drainage and Flooding 4.1

4.1.1 City and Public News Records

The City has received multiple drainage complaints in past years about areas within the Meadowlake Subdivision, including yard flooding and roadway flooding during frequent storm events. A photograph of the pond located near Village Green Drive, which has had reported flooding, is shown in Figure 5. One of the many large inlet structures located throughout the subdivision is shown in Figure 6.

4.1.2 Resident Comment Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received for the city planning area. Twelve comments were within the Meadowlake subdivision project area.

The known flood areas and resident comment locations are provided on Figure 4.









Figure 5. Pond at Northwestern Corner of Meadowlake Subdivision



Figure 6. Inlet Structure near Waterford Drive





4.2 As-built Plans and Data for Existing Infrastructure

The City provided as-built plans for the Meadowlake subdivision. This data was utilized to identify the existing stormwater network location and sizing. Additionally, Garnat collected extensive survey data for the stormwater network for this project.

4.3 GIS and Topographic Data

GIS data was collected for the CDMP and utilized for the Meadowlake subdivision study. Collected data included city and planning area limits, stormwater points and flowlines, subdivision boundaries, NFHL data, land use data, and topographic data.

For this project, 1-meter Digital Elevation Model (DEM) lidar topography from USGS Ouachita study was acquired from the Arkansas GIS Office.

5.0 Initial Screening Study

During Phase 1, an Initial Screening Study was performed for the Crooked Creek basin. For this screening, a hydraulic model was developed for the entire basin using 2D HEC-RAS and utilized rain-on-grid methodology to apply precipitation directly to the ground surface. This model was used to identify flood issues throughout the City, so is considered a qualitative model and not to be used for design. However, the data is useful in determining relative flood risk, and a flood severity index (FSI) was developed using the model results. Flood severity ranges from 0 to 4, with 4 being the most severe. The FSI classification are listed in **Table 1**. **Table 2** displays the FSI rankings for Meadowlake subdivision.





Table 1. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|-----------------------------------|--|
| FS0 | Minimal severity | < 0.5 | STATE OF BUILDING |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |

Table 2. Flood Severity Index For Meadowlake Subdivision

| 1 | O | | Potential Drainage | | Flood Severity Index | | Sever | | |
|------------|---|------------------|--------------------------|------|----------------------------|-------|--------|--|--|
| Location | Stream Name | Basin | Issue | 5 yr | 10 yr | 50 yr | 100 yr | | |
| Meadowlake | Unnamed Tributary to Crooked Creek | Crooked Creek | Neighborhood flooding | 2 | 2 | 2 | 2 | | |

Because of the high likelihood of flooding at multiple storm events, and historical flood issues in the area, Meadowlake subdivision was selected for further hydraulic study in order to identify conceptual drainage improvements.





6.0 XPSWMM Hydraulic Model

6.1 Existing Conditions Model

The Existing Conditions model was developed to represent the current conditions of the project area at the time the project modeling was performed. Details are given in the 6.1.1 Model Hydrology

The XPSWMM model utilizes rain-on-grid precipitation data to represent the flow within the model limits. This modeling approach used an excess precipitation hyetograph input as a distributed inflow boundary condition for the 2D model mesh. The excess precipitation hyetograph represents the precipitation that is converted to runoff from the watershed; i.e., the precipitation that is not infiltrated, evaporated, stored, or otherwise consumed by environmental features.

HEC-HMS v. 4.12 software was used to transform the precipitation hyetograph to the excess precipitation hyetograph for application of the rain-on-mesh methodology. The land use and soil characteristics of the area were used to develop a composite Natural Resources Conservation Service (NRCS, formerly Soil Conservation Service, SCS) curve number for the drainage area. Since the excess precipitation hyetograph is required for input to the rain-on-mesh 2D hydraulic model, the NRCS curve number is the only required hydrologic parameter in the HEC-HMS model.

Atlas 14 data was utilized to determine the point-precipitation hyetograph for each hypothetical frequency storm simulated in the HEC-HMS program. The HEC-HMS program output provided the excess precipitation hyetograph for each of the flow

6.1.2 Existing Conditions Model Geometry

The downstream boundary condition was set to normal depth slope at the downstream end of the model. The DTM for the 2D model was built from the lidar data, project survey, and design plans for newer constructed areas not reflected in the lidar. The Manning's n layer was set based on land use. The rainfall layer was set to the same extents as the grid layer and set to use a SCS Type III rainfall distribution with a





cumulative depth equal to the 24-hour NOAA Atlas 14 precipitation depth for the corresponding storm interval.

The 1D elements were compared to the survey data and updated as needed. The conduit and junction shapefiles included in the model accurately represented the elevations and lengths in the received survey, with few assumptions regarding connections. Channels were added as 1D elements using surveyed cross sections. The existing stormwater system is displayed in Figure 7.

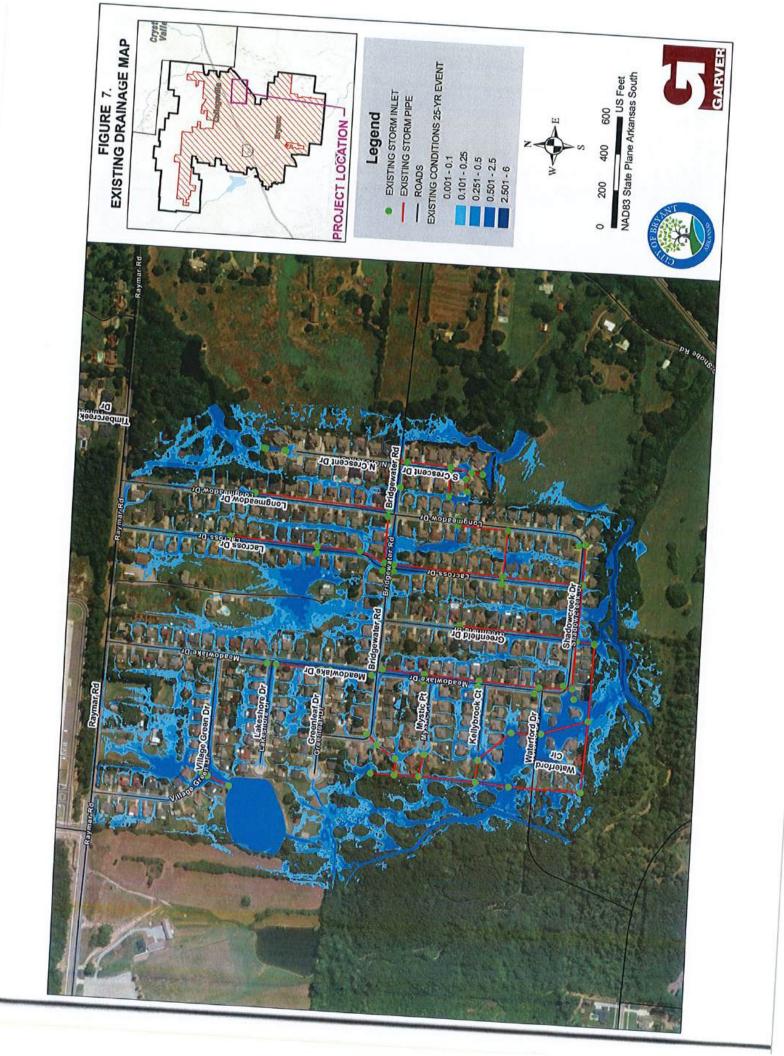
The model was set to run for 24 hours at a 1-minute time step. This run time allowed for the outflow hydrograph to reach its peak and for the falling limb to dissipate.

Proposed Conditions Model Geometry 6.2

The existing conditions model results was reviewed and problem areas within the subdivision were identified. After discussions with the City, the meadowlake subdivision was selected for proposed alternative development. The proposed alternatives were developed in order to meet a 25-year design event. Model geometry was updated for proposed conditions to reflect any updated pipe sizes, inlet sizes and locations, and grading. The proposed design is shown in Figure 8.

In order to improve flood conditions in the Meadowlake subdivision, drainage improvements along the Southwestern section of the neighborhood and at the detention pond in the northwestern section of the neighborhood are recommended. This includes the installation of additional stormwater drainage at Kellybrooke Court, replacing the majority of the stormwater drainage in the southwestern corner of the neighborhood (around Waterford Drive), and some regrading.









7.0 Conceptual Layout and Planning Level Opinion of Project Costs

A conceptual layout drawing and planning level opinion of project costs are provided in Appendix E-1. This layout is for graphical and planning purposes only and is not for construction.



Appendix E-1

Phase 2 Meadowlake Subdivision Improvements Conceptual Layout and Planning Level Opinion of Project Costs







| Planning Level O Meadow Lake Sul | • | | | |
|---|----------|----------|------------------|--------------------|
| Item Description | Unit | Quantity | Unit Cost | Total Cost |
| Unclassified Excavation | C.Y. | 280 | \$ 30.00 | \$ 8,400.00 |
| Embankment Construction | C.Y. | 89 | \$ 35.00 | \$ 3,115.00 |
| Aggregate Base Course (Class 7) | TON | 38 | \$ 50.00 | \$ 1,900.00 |
| Concrete Ditch Paving | S.Y. | 1012 | \$ 75.00 | \$ 75,900.00 |
| 30" Reinforced Concrete Pipe Culvert, Class III | L.F. | 180 | \$ 178.00 | \$ 32,040.00 |
| 36" Reinforced Concrete Pipe Culvert, Class III | L.F. | 1150 | \$ 252.00 | \$ 289,800.00 |
| 42" Reinforced Concrete Pipe Culvert, Class III | L.F. | 1130 | \$ 303.00 | \$ 342,390.00 |
| 48" Reinforced Concrete Pipe Culvert, Class III | L.F. | 200 | \$ 380.00 | \$ 76,000.00 |
| 4' x 8' Reinforced Concrete Box Culvert (440') | S.F. | 1760 | \$ 185.00 | \$ 325,600.00 |
| 48" Reinforced Concrete Flared End Section | Each | 2 | \$ 5,000.00 | \$ 10,000.00 |
| Drop Inlets | Each | 14 | \$ 9,000.00 | \$ 126,000.00 |
| Asphalt Pavement Repair | S.Y. | 265 | \$ 200.00 | \$ 53,000.00 |
| Pipe Embedment | C.Y. | 587 | \$ 60.00 | \$ 35,220.00 |
| Site Preparation (10%) | L.S. | 1 | \$ 203,922.00 | \$ 203,922.00 |
| Traffic Control (1%) | L.S. | 1 | \$ 20,537.00 | \$ 20,537.00 |
| Erosion Control (3%) | L.S. | 1 | \$ 61,644.00 | \$ 61,644.00 |
| Contingency (20%) | L.S. | 1 | \$ 411,590.00 | \$ 411,590.00 |
| Total Estimated Constr | uction C | ost | | \$ 2,077,058.00 |
| Additional Associated Costs | | | | |
| Utility Relocation (10%) | L.S. | 1 | \$ 207,706.00 | \$ 207,706.00 |
| Engineering and Survey Fee (18%) | L.S. | 1 | \$ 373,870.00 | \$ 373,870.00 |
| RW Acquisition and Easements (2%) | L.S. | 1 | \$ 41,541.00 | \$ 41,541.00 |
| Total Estimated Proj | ect Cost | | | \$ 2,700,200.00 |

Appendix F

Phase 2

Midland and Hilldale Roads at Owen Creek Improvements



Table 1. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|-----------------------------------|--|
| FS0 | Minimal severity | < 0.5 | 825 - 10 - 10 (3) |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |

Because of the high likelihood of flooding at multiple storm events, and historical flood issues in the area, Oak Glenn Subdivision was selected for further hydraulic study in order to identify conceptual drainage improvements.

Table 2. Flood Severity Index For Oak Glenn Subdivision

| Location | | | Potential Drainage | | Sev | ood erit dex | y | Com |
|--------------------------|----------------------------|---------------|--|------|-------|--------------------|--------|----------------------|
| | Stream Name | Basin | Issue | 5 yr | 10 yr | 50 yr | 100 yr | Resident Comments |
| Oak Glenn Subdivision | Owen Creek Tributary | Owen Creek | Neighborhood flooding; home flooding | 1 | 2 | 2 | 3 | 6 |

6.0 Hydrology

In Phase 1 of the CDMP, a hydrologic model of the Owen Creek basin was created using HEC-HMS 4.10. This model included Owen Creek Tributary. The determined flow rates are provided in Table 3. Delineated subbasins for Owen Creek Tributary are shown in Figure 8.



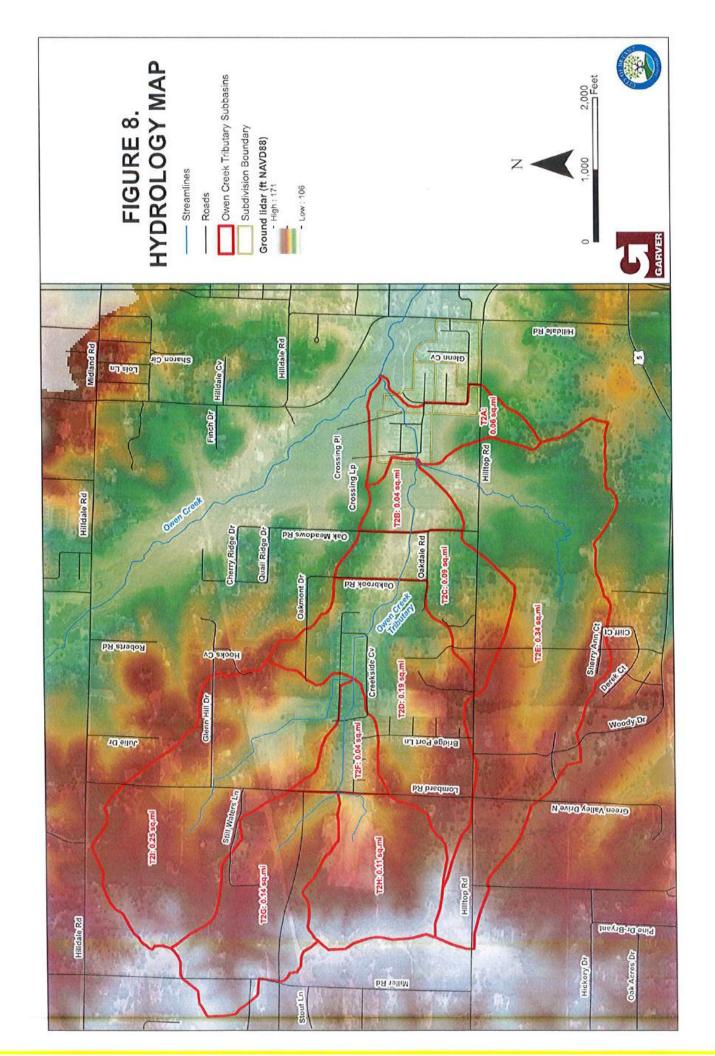


Table 3. Summary of Discharges for Owen Creek Tributary

| | Drainage | | | Flo | w Rate | (cfs) | | |
|---|-----------------|------|-----------|-----------|-----------|-------|------------|--------|
| Location along Stream | Area (sq mi) | 2-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100- yr | 500-yr |
| At Oak Meadows Road | 0.81 | 644 | 857 | 1,04 2 | 1,29 7 | 1,504 | 1,715 | 2,175 |
| At Crossing Loop | 1.19 | 903 | 1,19 5 | 1,46 1 | 1,81 8 | 2,097 | 2,397 | 3,043 |
| Just upstream of confluence with Owen Creek | 1.25 | 919 | 1,21 2 | 1,47 6 | 1,78 6 | 2,042 | 2,308 | 2,988 |

Flows determined in the HEC-HMS were compared to those calculated by the initial screening study model. For the 5-year and 10-year events, flows in the HEC-HMS model were slightly higher than in the screening model by up to 17%. For the 50-year and 100-year events, flows in the HEC-HMS model were slightly lower than the screening model by up to 18%. These differences are due to differences in calculation methodology and well as the fact that the screening model is based on lidar only and not fully representative of the drainage system. Differences in values are considered acceptable. HEC-HMS flow rates were used in the design hydraulic model.







7.0 Hydraulics

The hydraulic analysis was performed using HEC-RAS version 6.3.1. Because the project area is mapped as Zone X, no effective FEMA model exists. Therefore, a new hydraulic model was created for the project.

The 2-, 5-, 10-, 25-, 50-, 100-, and 500-year flows obtained from the HEC-HMS model discussed above were used in the models. The downstream boundary condition was set to a normal depth slope of 0.01 ft/ft. The slope was determined based on the average slope of the thalweg in the downstream portion of the modeled reach.

7.1 Existing Conditions

RAS Mapper was utilized to create the stream centerline, bank stations, flowpaths, cross sections, and profile lines for the model. Cross sections were located and oriented as required for proper hydraulic modeling of the floodplain. Cross section geometry data was updated with survey data where appropriate. Figure 9 shows a map of the model layout. The upstream model limits were set from approximately 1,100 feet upstream of Crossing Loop to the confluence with Owen Creek.

Cross section geometry was taken from 2016 USGS lidar data for the area and supplemented with project survey points collected by Garnat.

Manning's *n* values in the model were determined based on aerial imagery and site visit information. Ineffective areas for the flow were set based on topography and ineffective areas due to structures were set based on roadway elevations per the ARDOT Drainage Manual.

Existing structure data for the three stream crossings in the project model was determined from project survey as well as as-built drawings for the subdivision. Parameters for the existing structures are given in Tables 4, 5, and 6.





Table 4. Existing Crossing Loop Structure Data

| Parameter | Value |
|-----------------------------|-------------|
| Culvert Size & Type | 2-8'x6' RCB |
| Upstream Invert Elevation | 366.375 |
| Downstream Invert Elevation | 366.533 |
| Box Length | 48 ft |
| Open Flow Area | 96 sq. ft |

Table 5. Existing Crossing Place Structure Data

| Parameter | Value |
|-----------------------------|-------------|
| Culvert Size & Type | 2-8'x6' RCB |
| Upstream Invert Elevation | 361.292 |
| Downstream Invert Elevation | 360.783 |
| Box Length | 50 ft |
| Open Flow Area | 96 sq. ft |

Table 6. Existing Access Easement Structure Data

| Parameter | Value |
|-----------------------------|-------------|
| Culvert Size & Type | 2-8'x6' RCB |
| Upstream Invert Elevation | 361.163 |
| Downstream Invert Elevation | 361.163 |
| Box Length | 25 ft |
| Open Flow Area | 96 sq. ft |

In existing conditions, all structures overtop during all modeled flood events (2-year through 500-year). This aligns with the frequency of known flood events in the subdivision. The existing 25-year flood boundaries are displayed in Figure 9.





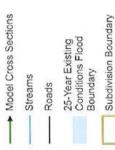
7.2 Proposed Conditions

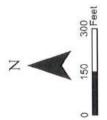
Based on the existing conditions results, all three culvert crossings of Owen Creek Tributary were identified as deficient for conveying storm flows at even lower rainfall amounts. Therefore, drainage improvements were iterated to upsize these culverts as well as improve the flow capacity of the stream channel. After multiple iterations, a design was developed to convey the 25-year event storm without overtopping roadways. This design involves upsizing the culverts at Crossing Loop and Crossing Place and removing the access easement crossing. In addition to these changes, the stream throughout the subdivision will be redesigned into a rectangular concrete channel to allow for improved conveyance during storm events. Parameters for the proposed updates are provided in Tables 7, 8, and 9.





FIGURE 9. EXISTING CONDITIONS MODEL MAP





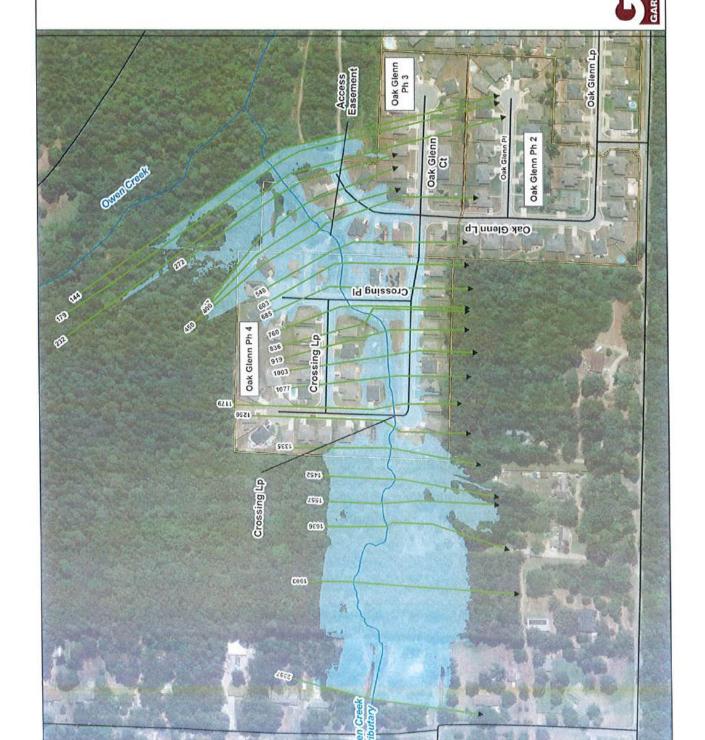




Table 7. Proposed Crossing Loop Structure Data

| Parameter | Value |
|-----------------------------|--------------|
| Culvert Size & Type | 3-10'x6' RCB |
| Upstream Invert Elevation | 366.375 |
| Downstream Invert Elevation | 365.74 |
| Box Length | 48 |
| Open Flow Area | 180 sq. ft |

Table 8. Proposed Crossing Place Structure Data

| Parameter | Value |
|-----------------------------|--------------|
| Culvert Size & Type | 3-10'x6' RCB |
| Upstream Invert Elevation | 361.292 |
| Downstream Invert Elevation | 360.783 |
| Box Length | 50 |
| Open Flow Area | 180 sq. ft |

Table 9. Proposed Channel Improvement Data

| Parameter | Value |
|-----------------|---|
| Channel Width | 25 ft |
| Channel Height | 6 ft |
| Chanel Shape | Rectangular |
| Channel Slope | 0.01 ft/ft to 0.002 ft/ft |
| Channel Extents | 100 ft upstream of Crossing Loop to 215 ft downstream of existing easement (1,050 ft total) |
| Other Features | Safety fence along creek banks |

A comparison of existing and proposed water surface elevations during the 25-year event is given in Table 10. The proposed improvement design layout and floodplain boundaries are shown in Figure 10.





Table 10. Comparison of Existing and Proposed WSELs for 25-year event

| Model Cross Section | Existing Conditions WSEL (ft NAVD88) | Proposed Conditions WSEL (ft NAVD88) | Difference in WSEL (ft) |
|------------------------|--|--|----------------------------|
| 2357 | 383.17 | 383.17 | 0.00 |
| 1903 | 380.07 | 380.07 | 0.00 |
| 1636 | 377.80 | 377.80 | 0.00 |
| 1557 | 377.17 | 377.17 | 0.00 |
| 1452 | 375.97 | 375.97 | 0.00 |
| 1335 | 375.64 | 372.69 | -2.95 |
| 1256 | 373.57 | 371.92 | -1.65 |
| 1216 | | Crossing Loop | |
| 1179 | 373.60 | 371.14 | -2.46 |
| 1077 | 372.46 | 370.12 | -2.34 |
| 1003 | 371.75 | 369.49 | -2.26 |
| 919 | 370.34 | 368.54 | -1.8 |
| 836 | 370.17 | 367.71 | -2.46 |
| 760 | 370.23 | 367.38 | -2.85 |
| 732 | | Crossing Place | |
| 685 | 370.12 | 366.66 | -3.46 |
| 603 | 369.72 | 366.76 | -2.96 |
| 548 | 369.73 | 366.82 | -2.91 |
| 500 | | Access Easement | |
| 450 | 369.27 | 366.79 | -2.48 |
| 400 | 369.27 | 366.65 | -2.62 |
| 347 | 367.31 | 366.5 | -0.81 |
| 272 | 367.28 | 365.69 | -1.59 |
| 232 | 365.69 | 365.68 | -0.01 |
| 179 | 365.17 | 365.17 | 0.00 |
| 144 | 364.65 | 364.65 | 0.00 |



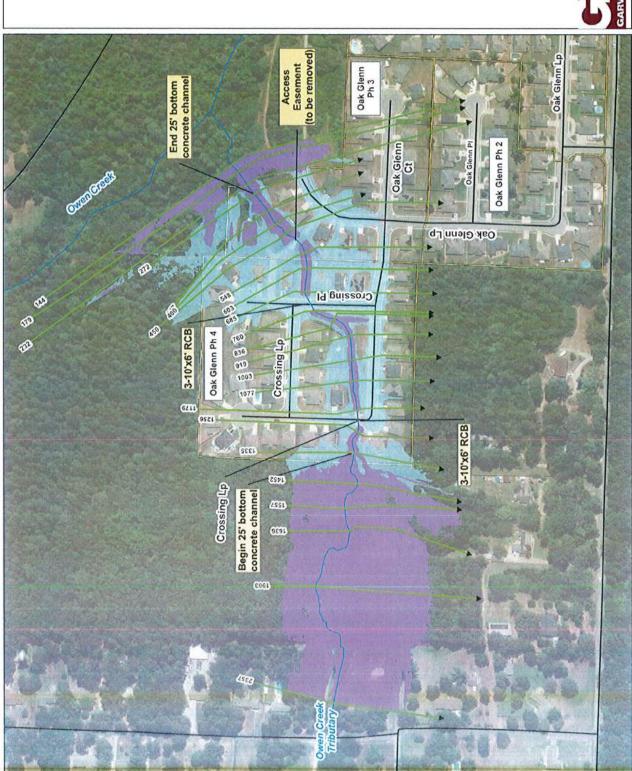


FIGURE 10. PROPOSED CONDITIONS MODEL MAP

→ Model Cross Sections - Streams

- Roads

25-Year Proposed Conditions Flood Boundary

25-Year Existing Conditions Flood Boundary

Subdivision Boundary







8.0 Conceptual Layout and Planning Level Opinion of Project Costs

A conceptual layout drawing and planning level opinion of project costs are provided in Appendix I-1. This layout is for graphical and planning purposes only and is not for construction.

9.0 Summary and Next Steps

In order to improve flood conditions in the Oak Glenn neighborhood, drainage improvements along Owen Creek Tributary are recommended. This includes the installation of new 3-10'x6' box culverts under Crossing Loop and Crossing Place, as well as channelization of the creek throughout the neighborhood with a 25-foot wide, 6-foot-tall rectangular concrete channel. For safety reasons, a fence is recommended along the channel banks throughout the neighborhood. Based on the hydraulic model results, the proposed drainage improvements decrease the likelihood of roadway and neighborhood flooding from approximately 99% annual chance event (1-year) to less than 4% annual chance event (25-year).

Prior to construction, a detailed design should be completed to optimize the layout while ensuring consistency with the parameters of the hydraulic model in this study. Due to the length of impacts to this USACE jurisdictional stream, a Section 404 Individual Permit will likely be required by USACE as well as the purchase of stream credits for compensatory mitigation.

Following construction of these proposed improvements, the City has requested that a Letter of Map Revision (LOMR) application be submitted to FEMA in order to map Owen Creek Tributary as Zone AE. Following construction, as-built survey of the proposed improvements should be collected and applied in the hydraulic model. A proposed floodway along the stream should also be developed prior to the LOMR application submittal. After updates to the model are performed, it can be submitted to FEMA for the map revision.



Appendix I-1

Phase 2 Oak Glenn Subdivision Improvements Conceptual Layout and Planning Level Opinion of Project Costs





4701 Northshore Drive North Little Rock, AR 72118

TEL 501 .376 .3633 FAX 501 .372 .8042

www. Garver USA .com

PLANNING LEVEL OPINION OF **PROJECT COSTS**

Concept Design Oak Glenn Channel Improvements City of Bryant March 21, 2023

\$3,770,000

Oak Glenn Channel Improvements

| hannel | | | | |
|----------------------|--|---|--------------------------|---|
| <u> Jilamiei</u> | | Cost (per Lin Ft.) | Length (Feet) | Total Cost |
| C | Concrete Channel | \$2,271 | 943 | \$2,140,000 |
| Box Culvert | _ | 1 Cost (per Sq. Ft.) | Area (Sq. Ft.) | Total Cost |
| 7 | Triple Box Culvert | \$145 | 3,217 | \$465,105 |
| | | Conti | ingency (10%) = | \$260,510 |
| | S | Subtotal Construction | n Costs (2024) = | \$2,865,615 |
| <u>Miscellaneous</u> | s | Subtotal Construction | | |
| | | | Percentage | Total Cost |
| | ² Planning and Eng | Subtotal Construction ineering Services = spection Services = | | |
| | ² Planning and Eng Engineering and Ins | ineering Services = | Percentage | Total Cost \$343,874 |
| | ² Planning and Eng Engineering and Ins ² ; | ineering Services = spection Services = | Percentage 12% 10% | Total Cost \$343,874 \$286,561 |
| | ² Planning and Eng Engineering and Ins ² ; ² F | ineering Services = spection Services = Stream Mitigation = | Percentage 12% 10% 3.5% | Total Cost \$343,874 \$286,561 \$100,297 |

Notes:

- ArDOT 2021 Planning Estimate Escalated at 7.00% per Year
 Detailed estimates are not available at this time. These percentage based estimates may vary from actual costs.

³ Total Opinion of Probable Planning and Construction Costs (2024) =

3. A conceptual layout has been performed for this projet at the time of this estimate. An effort has been made to include costs that are typical for this type of project, however, a full review of site specific costs has not been performed or included in this estimate.

Appendix J

Phase 2 Lea Circle near Hurricane Creek

Comprehensive Drainage Master Plan City of Bryant

Phase 2 Lea Circle near Hurricane Creek

Prepared by:



4701 Northshore Drive North Little Rock, Arkansas 72118

January 2025
Garver Project No.: 20T20090



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1.0 Overall Project Description

A Comprehensive Drainage Master Plan (CDMP) is being developed for the City of Bryant. The purpose of the City of Bryant CDMP is to:

- Evaluate the existing drainage conditions of the City and Extra-Territorial Jurisdiction (ETJ), also known as the planning area;
- · Identify current and future drainage problems;
- Generate proposed solutions to identified problems;
- Develop a Capital Improvement Plan (CIP); and
- Provide tools for managing future development.

The CDMP project is being performed in two (2) phases. Phases 1 and 2 will be divided into major tasks, with subtasks listed as applicable below these major tasks. **Figure 1** shows a flow chart of the overall project process.

- Phase 1: Data Collection and Initial Drainage Study Screening
- Phase 2: Survey Collection, Hydrologic and Hydraulic Modeling, Identification of Drainage Problems, Alternative Development, and CIP Development

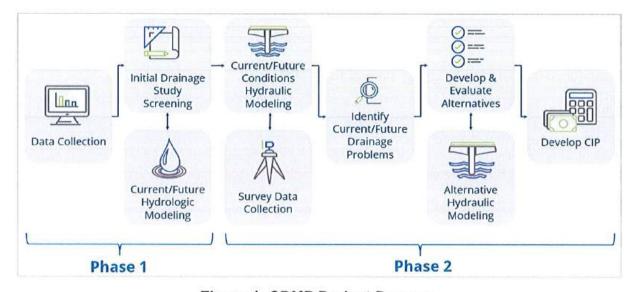


Figure 1. CDMP Project Process

This report discusses the processes and findings of a Phase 2 study for Lea Circle near Hurricane Creek.





2.0 General Information

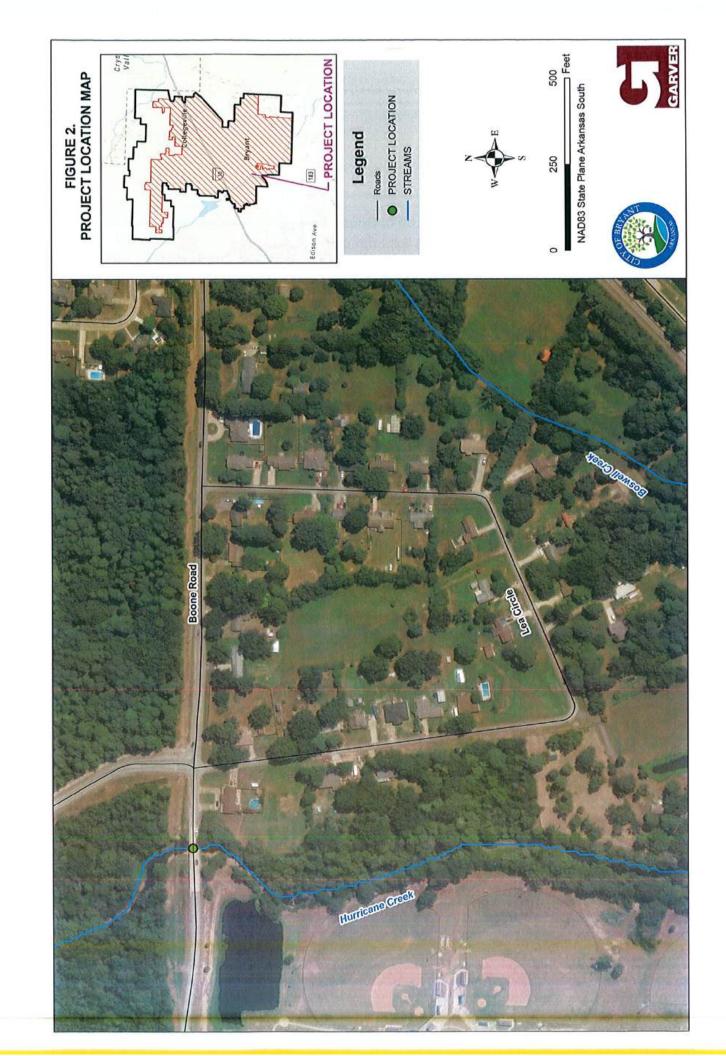
Lea Circle is a local road located just off of Boone Road east of Hurricane Creek. Several homes along Lea Circle have experienced reported flood losses due to flooding along Hurricane Creek and Boswell Creek. The project location map is shown in **Figure 2**.

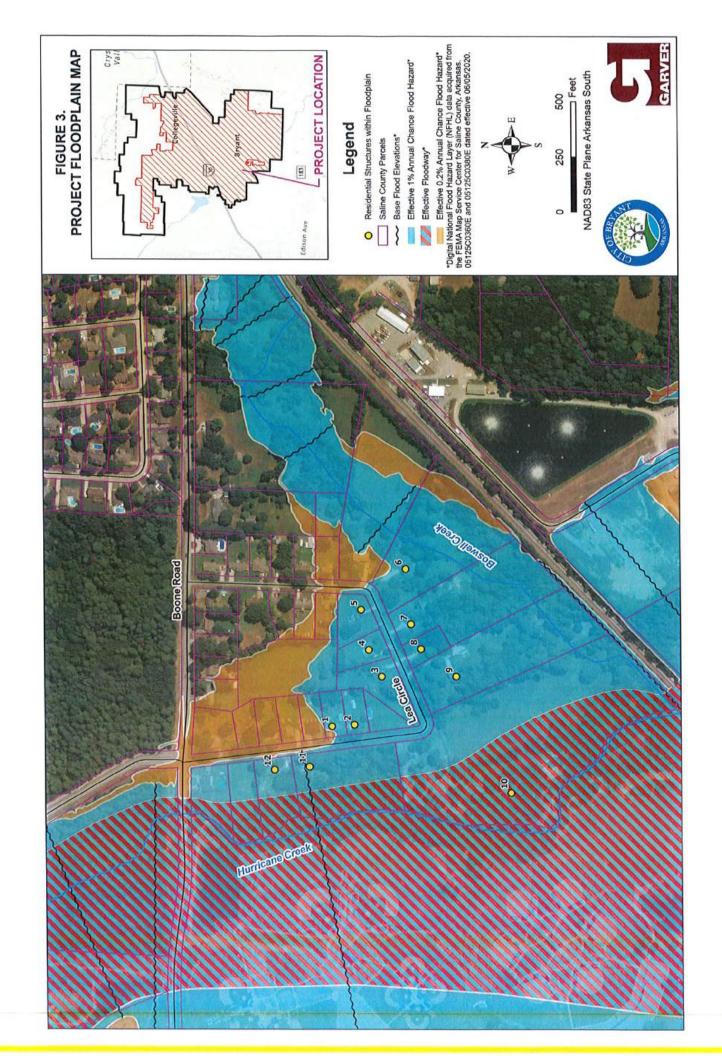
3.0 National Flood Insurance Program (NFIP) Data

The City of Bryant participates in the FEMA National Flood Insurance Program (NFIP). Current floodplain information and mapping is available in Flood Insurance Study (FIS) Report numbers 05125CV0001B and V0002B for Saline County, Arkansas, and Incorporated Areas. The City is mapped within Flood Insurance Rate Map (FIRM) Panels 0225E, 0240E, 0360E, 0370E, and 0380E. The project area of Lea Circle near Hurricane Creek is within FIRM panel 0360E. Hurricane Creek is mapped as Zone AE with floodway, and Boswell Creek is mapped as Zone AE. The Effective floodplain mapping for the project area is shown in Error! Reference source not found..

As shown in Figure 3, twelve residential structures are located within the Zone AE floodplain. This count does not include any detached garages, sheds, or other outbuildings located on the properties. One residential structure is located within the regulatory floodway of Hurricane Creek.









4.0 Data Collection

4.1.1 Resident Comment Database

For this CDMP, a public comment period was issued to allow city residents to submit drainage issues. The comment period ran from April 10 to May 22, 2022. A total of 264 comments were received for the city planning area. Three resident comments were received on Lea Circle. All three comments mention water over the roadway during flood events with damage to outbuildings, fences, and yards.

5.0 Initial Screening Study

During Phase 1, an Initial Screening Study was performed for the Hurricane Creek basin. For this screening, a hydraulic model was developed for the entire basin using 2D HEC-RAS and utilized rain-on-grid methodology to apply precipitation directly to the ground surface. This model was used to identify flood issues throughout the City, so is considered a qualitative model and not to be used for design. However, the data is useful in determining relative flood risk, and a flood severity index (FSI) was developed using the model results. Flood severity ranges from 0 to 4, with 4 being the most severe. The FSI classifications are listed in **Table 1**. **Table 2** displays the FSI rankings for Owen Creek.

Table 1. Flood Severity Index Classes

| Class | Description | Maximum Flood Depth (ft) | Maximum Flood Velocity (ft/s) |
|-------|--|-----------------------------------|--|
| FS0 | Minimal severity | < 0.5 | |
| FS1 | Unsafe for vehicles and pedestrians | < 1.5 | < 6.0 |
| FS2 | Moderate flooding hazard for buildings | < 3 | < 6.0 |
| FS3 | Potential for structural damage | > 3 | < 6.0 |
| FS4 | Unsafe for vehicles and pedestrians; Potential for structural damage | > 0.5 | >6.0 |





Because of the high likelihood of flooding at multiple storm events, and historical flood issues in the area, Midland Road and Hilldale Road were selected for further hydraulic study in order to identify conceptual drainage improvements.

Flood Severity Index Potential Location Stream Name Basin Drainage Issue 100 50 5 ¥ ٧r Yr ¥ Hurricane Roadway Hurricane Lea Circle and Boswell overtopping; 3 3 3 3 Creek Creeks home flooding

Table 2. Flood Severity Index for Lea Circle

6.0 Proposed Drainage Solution

The floodplain at Lea Circle cannot be substantially decreased in size due to the railroad crossing downstream. This railroad crossing is causing significant backwater that cannot be minimized without improvements to the railroad bridges. Coordination with railroad companies is arduous and complex, therefore, improvement of the railroad bridges is unlikely.

Because of the likelihood of repetitive losses to the properties located in the floodplain, a potential solution would be for the City to buy out these properties. A list of the properties and their estimated values are provided in Table 4. These values were acquired online. Prior to property buyout, elevation certificates for each property should be completed to determine if a Letter of Map Amendment (LOMA) can be completed for the property. If structure elevations are adequate, a LOMA could remove structures from the floodplain and remove the requirement for flood insurance. Properties able to meet the requirements for a LOMA would not need to be bought out by the City. Additionally, each property should be formally assessed to determine actual property value. Note: the property located at the corner of Boone Road and W. Lea Circle was not included in the potential buyout list because it has already been removed from the floodplain via a LOMA.





Table 3. Estimated Property Values

| Map ID | Property Address | Estimated Value* |
|--------|--------------------|------------------|
| 1 | 207 W. Lea Circle | \$179,300 |
| 2 | 211 W. Lea Circle | Not Available |
| 3 | 1702 S. Lea Circle | \$140,100 |
| 4 | 1610 S. Lea Circle | \$147,700 |
| 5 | 1602 S. Lea Circle | \$136,900 |
| 6 | 1601 S. Lea Circle | \$364,200 |
| 7 | 1609 S. Lea Circle | \$284,100 |
| 8 | 1613 S. Lea Circle | \$177,000 |
| 9 | 1705 S. Lea Circle | \$412,000 |
| 10 | 1713 S. Lea Circle | \$626,100 |
| 11 | 200 W. Lea Circle | \$163,200 |
| 12 | 112 W. Lea Circle | \$193,900 |

^{*} Estimated values obtained from Zillow.com in December 2024; values are subject to change based on market fluctuations.

7.0 Planning Level Opinion of Project Costs

A planning level opinion of project cost is provided in Appendix J-1. As mentioned in Section 5, in order to determine actual property value, each property should be formally assessed.



Appendix J-1

Phase 2 Lea Circle Buyout Planning Level Opinion of Project Costs



| | | iing Level Opin ea Circle near I | | | | |
|-------------------------------------|------|-------------------------------------|-----------|------------|------------|--------------|
| Item Description | Unit | Quantity | Unit Cost | | Total Cost | |
| 207 W. Lea Circle¹ | L.S. | 1 | \$ | 179,300.00 | \$ | 179,300.00 |
| 211 W. Lea Circle² | L.S. | 1 | \$ | 257,000.00 | \$ | 257,000.00 |
| 1702 S. Lea Circle ¹ | L.S. | 1 | \$ | 140,100.00 | \$ | 140,100.00 |
| 1610 S. Lea Circle ¹ | L.S. | 1 | \$ | 147,700.00 | \$ | 147,700.00 |
| 1602 S. Lea Circle ¹ | L.S. | 1 | \$ | 136,900.00 | \$ | 136,900.00 |
| 1601 S. Lea Circle ¹ | L.S. | 1 | \$ | 364,200.00 | \$ | 364,200.00 |
| 1609 S. Lea Circle ¹ | L.S. | 1 | \$ | 284,100.00 | \$ | 284,100.00 |
| 1613 S. Lea Circle ¹ | L.S. | 1 | \$ | 177,000.00 | \$ | 177,000.00 |
| 1705 S. Lea Circle ¹ | L.S. | 1 | \$ | 412,000.00 | \$ | 412,000.00 |
| 1713 S. Lea Circle ¹ | L.S. | 1 | \$ | 626,000.00 | \$ | 626,000.00 |
| 200 W. Lea Circle ¹ | L.S. | 1 | \$ | 163,200.00 | \$ | 163,200.00 |
| 112 W. Lea Circle ¹ | L.S. | 1 | \$ | 193,900.00 | \$ | 193,900.00 |
| Contingency (20%) | L.S. | 1 | \$ | 616,280.00 | \$ | 616,280.00 |
| Total Estimated Project Cost | | | | | \$ | 3,697,700.00 |

¹ Estimated values obtained from Zillow.com in December 2024; values are subject to change based on market fluctuations

 $^{^{\}rm 2}$ Estimated value is not available; an average price was used for the unit cost