ADEQ
ARKANSAS
Department of Environmental Quality

September 19, 2017

Philip Ofosu (6SF-TS)
USEPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: Street & Performance, Inc.
1 Hot Rod Lane, Mena, Polk County, Arkansas
Preliminary Assessment Report
EPA SEMS ID: ARR000006957; AFIN: 57-00259

Dear Mr. Ofosu:

The Arkansas Department of Environmental Quality Office of Land Resources (ADEQ) has completed the Preliminary Assessment (PA) for the Street & Performance, Inc. ("Street & Performance") site located in Mena, Polk County, Arkansas. Enclosed are one (1) hard copy and one (1) CD of the PA Report.

Based upon ADEQ's findings during this PA investigation, further investigation at the site is recommended.

If you have any questions or require additional information, please contact me at (501) 682-0872 or by email at krepsk@adeq.state.ar.us.

Sincerely,

Katie Kreps
Site Assessment and Brownfield Inspector
Office of Land Resources
Arkansas Department of Environmental Quality

Enclosures: PA Report and CD

PRELIMINARY ASSESSMENT
FOR
STREET & PERFORMANCE, INC.
EPA SEMS ID: ARR000006957
MENA, POLK COUNTY, ARKANSAS

Philip Ofosu
EPA Site Assessment Manager

Date

Jarrod Zweifel
Assessment and Remediation Senior Manager
Office of Land Resources
Arkansas Department of Environmental Quality

9/18/17
Date

Terry Sligh
Site Assessment and Brownfield Supervisor
Office of Land Resources
Arkansas Department of Environmental Quality

9-18-17
Date

Katie Kreps
Site Assessment and Brownfield Inspector
Office of Land Resources
Arkansas Department of Environmental Quality

09/18/2017
Date

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ACRONYMS

ADEQ	Arkansas Department of Environmental Quality
ADH	Arkansas Department of Health
AFIN	ADEQ Facility Identification Number
AHTD	Arkansas Highway and Transportation Department
ANHC	Arkansas Natural Heritage Commission
ANRC	Arkansas Natural Resources Commission
APC&EC	Arkansas Pollution Control and Ecology Commission
AST	aboveground storage tank
BGS	below ground surface
CAA	Clean Air Act
CAO	Consent Administrative Order
CEI	Compliance Evaluation Inspection
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CWA	Clean Water Act
FEMA	Federal Emergency Management Agency
LQG	Large Quantity Generator
NAICS	North American Industry Classification System
NEPA	National Environmental Policy Act
NOV	Notice of Violation
NRCS	Natural Resources Conservation Service
PA	Preliminary Assessment
PDS	Permit Data System
PPE	Probable Point of Entry

LIST OF ACRONYMS (cont.)

RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SQG	Small Quantity Generator
TDL	Target Distance Limit
TSDF	Treatment, Storage, and Disposal Facility
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

1.0 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the 1986 Superfund Amendments and Reauthorization Act (SARA), the Arkansas Department of Environmental Quality (ADEQ) Office of Land Resources, was tasked by the United States Environmental Protection Agency (USEPA) Region 6 to conduct a Preliminary Assessment (PA) for the Street & Performance, Inc. ("Street & Performance") site located in Mena, Polk County, Arkansas.

1.1 Project Objective

The objective of this investigation was to collect information concerning conditions at the Street & Performance site sufficient to assess the potential threat posed to human health and the environment and to determine the need for additional CERCLA/SARA or other appropriate action.

1.2 Project Scope

The scope of the investigation included review of available file information, a comprehensive contamination migration pathway target survey, and limited on-site and off-site reconnaissance.

Report Format

This PA Report was prepared to present the findings of the PA investigation. The PA Report contains the following sections:

- Section 1 – Introduction
- Section 2 – Site Background
- Section 3 – Migration/Exposure Pathways and Targets
- Section 4 – Summary and Conclusions
- Section 5 – References
- Section 6 – Photographic Log

Additional information is provided in the appendices following the text of the PA Report. The appendices are as follows:

- Appendix A – Property Records
- Appendix B – Historical Aerial Photographs
- Appendix C – Arkansas Natural Resources CommissionWatershed Maps and Information
- Appendix D – Arkansas Natural Heritage Commission File Review
- Appendix E – Natural Resources Conservation Service Custom Web Soil Survey Report

2.0 SITE BACKGROUND

Sections 2.1 through 2.4 provide background information characterizing the Street & Performance site. ADEQ collected and reviewed available background information regarding the location, description, former operations, and potential waste sources at the site.

ADEQ submitted a Potential Hazardous Waste Site Identification Form for the Street & Performance site to USEPA Region 6 on August 23, 2017. According to ADEQ records and Arkansas Highway and Transportation Department (AHTD) historical aerial photographs, the original building was constructed and Street & Performance is presumed to have commenced operations on-site on February 10, 1987, when the facility became a hazardous waste operator. Between 1990 and 2006, another building was constructed on-site and additions were made to this and the original building. While in operation, Street & Performance manufactured and plated custom automotive parts and automobile engines. Manufacturing processes at the site included: aluminum casting and milling, spray coating, buffing, polishing, electroplating, and thermo-coating. Due to market changes, Street & Performance ceased all operations on-site on October 28, 2016. According to Polk County property records, the site is currently owned by Street & Performance.

The discussions in this section of the PA Report are based on background information and site reconnaissance conducted on May 2, 2017.

2.1 Site Location and Setting

The Street & Performance site is located at 1 Hot Rod Lane, Mena, Polk County, Arkansas. **Figure 2-1** provides the location of Polk County and the Street & Performance site. The Street & Performance site is located in a mixed residential and commercial area, with an open vegetated field to the north; a wooded area to the east; Prairie Creek, a residence, and an unidentified commercial facility to the south; and Highway 375 and an open vegetated field to the west (Refer to Photographic Log, Photos 1–6).

Mena is located in north-central Polk County, on the western border of Arkansas. Mena has a population of 5,660 residents and 2,744 housing units within the city limits. The total land area is 6.74 square miles, with the population per square mile estimated at 840 (Reference ("Ref.") 1).

According to Google Earth Pro, the approximate geographic coordinates for the center of the site are 34.564123º north latitude and -94.217089º west longitude. The site is relatively flat with minor changes in elevation, with the center approximately 1,025 feet above mean sea level (Ref. 2).

2.1.1 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low income populations. The remainder of this section provides information for considering environmental justice within the vicinity of the Street & Performance site.

According to the City-Data website, Mena has a population of 5,660 residents with 2,744 housing units. The site's zip code is 71953. Mena experienced a 0.4 percent increase in population between 2000 and 2014. The population racial percentages in 2015 were as follows: 93.0 percent Caucasian; 3.2 percent two (2) or more races; 1.4 percent American Indian; 1.0 percent Asian; 0.7 percent Hispanic; and 0.3 percent African American. The estimated median household income for Mena in 2015 was $28,939, compared to the estimated median household income for Arkansas of $41,995. The percentage of Mena residents with income below the 2015 poverty level was 18.5, while the Arkansas average was 25.3. Compared to the Arkansas state average, Mena was rated "significantly below" in the categories of "unemployed percentage," "black race population percentage," "Hispanic race population percentage," "foreign-born population percentage," and "length of stay since moving."

2.2 Site Description

Street & Performance is situated in a mixed residential and commercial area on an approximately 4.96-acre lot in Mena, Polk County, Arkansas. The site is bordered by an open vegetated field to the north; a wooded area to the east; Prairie Creek, a residence, and an unidentified commercial facility to the south; and Highway 375 and an open vegetated field to the west. **Figure 2-2** provides an aerial view and shows the site boundary, significant site features, and adjacent properties and roads.

The Street & Performance site consists mostly of concrete, gravel, vegetated areas, and some areas of exposed soil. One (1) approximately 30,000 square foot metal-sided building ("South Building") and one (1) approximately 25,000 square foot metal-sided building ("North Building"), both with concrete foundations, are located on the site (Refer to Photographic Log, Photos 7–10). In addition, a small metal-sided shed is located on the south portion and a trailer is located on the northwest portion of the site (Refer to Photographic Log, Photos 11 and 12).

The Street & Performance site is not fenced, and is easily accessible to trespassers. A concrete entrance driveway is located on the west side of the site and leads to an office area on the west portion of the South Building. Concrete parking areas are located on the south and west portions and gravel parking areas are located on the east and north portions of the site. Concrete drainage runs between the South Building and North

Building. In addition, an approximately 2,000 square foot concrete area formerly used for storage of 55-gallon drums ("Concrete Storage Area") is located on the east portion between these two (2) buildings. During site reconnaissance, the Concrete Storage Area had staining in the shape of rings indicative of former 55-gallon drums (Refer to Photographic Log, Photo 13).

During site reconnaissance, multiple areas of disturbed soil and gravel, and debris including scrap metal, wood pallets, lumber, and tires were located throughout the site, primarily on the east portion (Refer to Photographic Log, Photos 14–16). A burn pile was located in a vegetated area on the east portion of the site (Refer to Photographic Log, Photo 17). Two (2) empty approximately 250-gallon plastic totes were located on the northeast portion of the site. The former contents of these totes are unknown. An approximately six (6) inch diameter plastic pipe extending underground is located on the northeast portion of the site (Refer to Photographic Log, Photo 18). The purpose of this pipe could not be determined during this PA investigation. Multiple smaller plastic and metal pipes are extending from the northeast portion of the North Building, and are presumed to be for air conditioning purposes (Refer to Photographic Log, Photo 19).

Surface water runoff flows directly into Prairie Creek along the south site boundary and into unnamed drainage that runs throughout the site eventually flowing into Prairie Creek (Refer to Photographic Log, Photos 20 and 21). Prairie Creek flows east along the south site boundary, eventually reaching the Ouachita River approximately 3.8 miles northeast of the Street & Performance site.

2.3 Site Ownership History

The Street & Performance site ownership history was established via a review of Polk County property records and the ADEQ electronic records database ("Zylab"). The Street & Performance site is located in Section twenty (20), Township two (2) South, Range thirty (30) West (Ref. 3). The legal description for the Street & Performance site is as follows:

Part of the Northeast Quarter of the Southeast Quarter of Section Twenty (20), Township Two (2) South, Range Thirty (30) West, Polk County, Arkansas, described as follows: Beginning at the Northwest corner of said NE 1/4 SE 1/4 and running thence East along the North line of said NE 1/4 SE 1/4 to where it intersects the East line of the right of way of Hwy. #375 for a point of beginning, thence farther East along said line a distance of four hundred (400) feet; thence South to the North bank of Prairie Creek; thence Westerly along the North bank of Prairie Creek to where it intersects with the East right of way of Hwy. #375; thence Northerly along the East right of way of Hwy. #375 to the point of beginning. The above described tract being two (2) acres, more or less, and subject to highway, sewer line and gas line, easements, of any. Also, subject to public utilities and roadway easements.

According to ADEQ records and AHTD historical aerial photographs, the original building (South Building) was constructed and Street & Performance is presumed to have

commenced operations on-site on February 10, 1987, when the facility became a hazardous waste operator. Due to market changes, Street & Performance ceased all operations on-site on October 28, 2016. According to Polk County property records, the site is currently owned by Street & Performance. Plans for any future operations at the Street & Performance site could not be determined.

Appendix A provides copies of Polk County property records for the Street & Performance site. These records contain information regarding the property parcel number, acreage, tax records, and ownership.

2.4 Site Operations and Waste Characteristics

The remainder of this section provides available information regarding operations and waste characteristics associated with the Street & Performance site. Information was obtained via ADEQ Zylab and Permit Data System (PDS) file reviews.

2.4.1 Historical Waste Management Practices

Historical information available in ADEQ Zylab and PDS specific to the waste management practices at the Street & Performance site is summarized below.

While in operation, Street & Performance manufactured and plated custom automotive parts and automobile engines. Manufacturing processes at the site included: aluminum casting and milling, spray coating, buffing, polishing, electroplating, and thermo-coating. According to Resource Conservation and Recovery Act (RCRA) Subtitle C Site Identification Forms, waste streams generated at the Street & Performance site included D002 (corrosive), D005 (barium), D006 (cadmium), D007 (chromium), F003 and F005 (spent solvents), F006 (wastewater treatment sludge from electroplating operations), and F007 (spent cyanide plating bath solutions).

A review of the ADEQ PDS indicated that ADEQ Facility Identification Number (AFIN) 57-00259 is associated with the Street & Performance site. Street & Performance has an inactive hazardous waste EPA identification number (ARR000006957).

According to ADEQ records, the Street & Performance site was a Large Quantity Generator (LQG) of hazardous waste from 2001 until its closing in 2016. Prior to 2001, Street & Performance registered as a Small Quantity Generator (SQG) of hazardous waste.

ADEQ records showed that Street & Performance stored materials and generated potential waste containing the following contaminants on-site: methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid,

hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents.

A review of ADEQ records indicated the following violations and complaints at the Street & Performance site:

> Street & Performance had numerous occurrences of submitting Hazardous Waste Annual Reports and paying fees past required due dates.
>
> As a result of a complaint, ADEQ conducted a Compliance Evaluation Inspection (CEI) at the Street & Performance site on July 22, 1999. This CEI revealed no occurrences of significant noncompliance; however, Street & Performance was cited for failing to label or mark clearly containers used for storage of used oil with the words 'Used Oil." ADEQ did not receive written notification of any actions taken by Street & Performance to correct this violation.
>
> The July 22, 1999 CEI also revealed that two (2) approximately 300-gallon rinse water tanks were dumped outside a building on the Street & Performance site every week. Analytical results dated July 23, 1999 were below concentrations for the rinse water to be regulated as a hazardous waste. Additional sampling was conducted on August 16, 1999, and revealed high levels of chromium, lead, and barium in soil samples. Further sampling was recommended, which Street & Performance voluntarily performed. Additional sampling and soil removal between the two (2) main buildings was completed on June 26, 2001. Based on the results of the confirmation samples, which were below industrial screening levels, and the contaminated area being paved by Street & Performance, eliminating a future pathway, ADEQ considered the July 22, 1999 CEI closed.
>
> On May 4, 2007, ADEQ received a call from Mena Water Utilities regarding a complaint that a rinse water tank or a nickel-chromium plating bath tank on the Street & Performance site had been emptied into a box drain that leads directly into the city's sewer system. In addition, the Mena Wastewater Treatment Plant had experienced a recent fish kill in one (1) of their lagoons. On June 15, 2007, employees from Mena Water Utilities and the Mena Wastewater Treatment Plant sampled the box drain. Analytical results indicated an elevated chromium level that was well above the toxicity characteristic level for a hazardous waste as defined in Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. 23 Section 261.24. Based on this information, ADEQ conducted a CEI at the Street & Performance site on July 10, 2007, which revealed the following violations:

- Failure to inspect areas where containers are stored, at least weekly, looking for leaks and deterioration;
- Failure to make arrangements to familiarize the local authorities with the properties of hazardous waste handled at the facility;
- Failure to determine if a solid waste is a hazardous waste;
- Failure to comply with the requirements for a new tank system;
- Failure to conduct the required personnel training;
- Failure to comply with applicable contingency plan and emergency procedure requirements; and
- Failure to obtain a permit for the treatment of hazardous waste.

In response to these violations, a Consent Administrative Order (CAO) (LIS 08-040) was entered into between ADEQ Hazardous Waste Division and Street & Performance on June 9, 2008. Street & Performance completed all requirements, and CAO (LIS 08-040) was closed on June 14, 2011.

In response to another complaint regarding chemical storage, the drainage between the two (2) main buildings on-site, and barrels stored outside, the ADEQ Office of Water Quality performed an investigation at the Street & Performance site on April 10, 2009. This Complaint Investigation revealed that a pile of waste sand needed to be removed from the site and properly disposed, a burn pile at the rear of the site needed to be removed and properly disposed, and an Industrial Stormwater Permit was needed for the site. Street & Performance addressed these deficiencies and sent a letter to ADEQ documenting the corrective actions taken. The complaint was closed on April 24, 2009.

During another Complaint Investigation conducted at the Street & Performance site on October 20, 2011, ADEQ observed activities believed to warrant an investigation by the Department of Labor including lack of ventilation in the plating area, lack of personal protective equipment for employees in the grinding and polishing area, employees eating in the grinding and polishing area, and potential employee exposure to hazardous constituents in the plating area, ceramic coating area, and paint booths. ADEQ notified the Department of Labor of these activities via letter dated November 14, 2011.

On October 20, 27, and November 4, 2011, ADEQ conducted another Complaint Investigation and subsequent CEI at the Street & Performance site. ADEQ observed approximately 115 55-gallon drums containing hazardous waste, some of which had been on-site since 2009. In addition, the CEI revealed numerous instances of significant noncompliance including the following:

- Failure to maintain a maximum of 55-gallons of hazardous waste at a Satellite Accumulation Area;

- Failure to keep a container of hazardous waste closed while being accumulated on-site;
- Failure to label a container of hazardous waste as such while being accumulated on-site;
- Failure to date a container of hazardous waste with the date accumulation began;
- Failure to maintain hazardous waste analysis data at the facility;
- Failure to submit an annual report for hazardous waste activities from the previous year by March 1st;
- Failure to submit an accurate annual report for hazardous waste activities from the previous year;
- Knowingly signing a false annual report for hazardous waste activities;
- Purposely or knowingly making a false statement and certification in a report required under Regulation No. 23;
- Failure to conduct annual hazardous waste refresher training;
- Failure to document job titles and names of persons filling hazardous waste jobs at the facility;
- Failure to document facility hazardous waste job descriptions;
- Failure to maintain adequate aisle space for the movement of emergency equipment and personnel;
- Failure of a LQG of hazardous waste to store hazardous waste for no more than ninety (90) days;
- Failure to obtain a permit to store over 13,200 pounds of hazardous waste on-site for longer than ninety (90) days; and
- Failure to conduct weekly inspections of the hazardous waste storage area.

The CEI Report was mailed to Street & Performance on December 20, 2011. Street & Performance sent a response to ADEQ on January 4, 2012, addressing the violations found in the CEI. A Notice of Violation (NOV) (LIS 12-096) was executed on June 6, 2012.

As a result of an anonymous complaint received on January 7, 2013, which alleged that Street & Performance was "stockpiling hazardous waste," ADEQ conducted another CEI at the site on January 9, 2013. This CEI revealed that Street & Performance had stored 132 containers of hazardous waste on-site for greater than ninety (90) days. In addition, Street & Performance was cited for:

- Failure to obtain a permit for the storage of hazardous waste;
- Failure to mark a satellite accumulation container with the words "Hazardous Waste" or other words to identify the contents of the container;
- Failure to label or mark each container of hazardous waste with the words "Hazardous Waste";

- Failure to mark the accumulation start date on each container of hazardous waste;
- Failure to keep a container of hazardous waste closed except when adding or removing waste;
- Failure to properly prepare a hazardous waste manifest;
- Failure to maintain adequate aisle space for the movement of emergency equipment and personnel; and
- Failure to conduct weekly inspections of hazardous waste storage areas.

Street & Performance addressed these violations and sent documentation to ADEQ on January 25, 2013. The original NOV (LIS 12-096) was amended to add the above violations and an Amended NOV (LIS 12-096) was executed on April 23, 2013. On March 28, 2014, APC&EC issued Minute Order No. 14-16 to Street & Performance. Minute Order No. 14-16 upheld the violations and corrective actions listed in the Amended NOV (LIS 12-096) and required Street & Performance to pay a civil penalty of $120,000.

On May 18, 2016, the ADEQ Office of Land Resources conducted another CEI at the Street & Performance site as a result of an anonymous complaint which alleged that the facility was "storing waste." The CEI revealed numerous instances of significant noncompliance including the following:

- Failure to pay the remaining balance of $88,000 of the civil penalty due after failing to make scheduled monthly payments;
- Failure to determine if a solid waste is a hazardous waste;
- Failure to keep a container of hazardous waste closed except when adding or removing waste;
- Failure to mark a satellite accumulation container with the words "Hazardous Waste" or other words to identify the contents of the container;
- Accumulating hazardous waste on-site for greater than ninety (90) days;
- Failure to obtain a permit for the storage of hazardous waste;
- Failure to label or mark clearly each container of hazardous waste with the words "Hazardous Waste";
- Failure to mark the date upon which each period of accumulation began on each container of hazardous waste;
- Failure to submit an annual report to ADEQ by March 1st of each year;
- Failure to submit a description, EPA hazardous waste number, and quantity of each hazardous waste generated on-site and either accumulated, treated, stored, or disposed of on-site or shipped off-site to a Treatment, Storage, and Disposal Facility (TSDF); and
- Signing an inaccurate annual report for hazardous waste activities.

ADEQ hand-delivered the CEI Report to Street & Performance on July 14, 2016; however, Street & Performance did not address the aforementioned violations.

ADEQ received a letter from Street & Performance dated October 24, 2016, stating that the facility would be ceasing all operations and closing on October 28, 2016. On February 1, 2017, an inspection was conducted that confirmed Street & Performance was no longer in business; however, ADEQ also observed numerous containers of hazardous and non-hazardous waste, electroplating solutions (including cyanide, chromium, and nitric acid), various rinse tanks, lead contaminated water, waste solvents, sodium cyanide solutions, approximately 100 used fluorescent lamps, a pile of waste foundry sand, and a roll-off container with waste foundry sand remaining on the site. In response to these findings, the Director of the ADEQ issued an Emergency Order for remedial actions to be taken immediately to remedy the emergency conditions. A final inspection was performed on the Street & Performance site on March 23, 2017, after all abandoned waste, totaling approximately 199,320 pounds, was characterized and removed.

Table 2-1 summarizes the review of historical aerial photographs of the Street & Performance site obtained during this PA investigation (Ref. 4).

Table 2-1. Summary of Historical Aerial Photographs

Year	Subject Property Description	Surrounding Area Description
1976	No structures visible on the site. Site consists of a wooded plot of land.	The site is bordered by an open vegetated field to the north; a wooded area with an unnamed stream and Highway 8 to the east; Prairie Creek, a wooded area, and an open vegetated field to the south; and Highway 375, an open vegetated field, and a wooded area to the west. A residence is visible northwest of the site in the open vegetated field.
1982	Site does not appear to have changed significantly from the 1976 photograph.	Similar in appearance to the 1976 photograph. Construction has occurred east of Highway 8, where parked cars and debris are now visible. A drive is now present running through the vegetated field south of the site.
1990	One (1) main building (South Building) and a trailer are visible on the site. Cars are visible in a parking area south of the building. A small pond appears to be present near the northeast corner of the South Building.	A housing development has been built east of Highway 8. Elk Drive has been built through the vegetated field south of the site. An unidentified building and future Mena Elks Lodge have been built on the south side of Elk Drive. An unidentified facility comprised of multiple buildings has been built north of Elk Drive. Cars are visible parked around the facility.

Table 2-1. Summary of Historical Aerial Photographs (cont.)

Year	Subject Property Description	Surrounding Area Description
1994	An area of land directly adjacent to the north side of the South Building has been cleared of trees. An addition has been built on the south side of the South Building. The pond near the northeast corner of the South Building is no longer visible.	Surrounding area does not appear to have changed significantly from the 1990 photograph.
2001	A new building (North Building) has been constructed and more trees have been cleared north of the South Building.	Similar in appearance to the 1994 photograph. An addition has been built onto the unidentified building south of the site. More debris is visible around the unidentified facility south of the site. A residence has been built south of the site, and east of the unidentified facility.
2006	An addition has been built on the east side of the North Building. Cars and debris are visible north and east of the buildings.	Similar in appearance to the 2001 photograph. A gravel drive now runs through the vegetated field east of the unidentified building south of the site.
2009	Site does not appear to have changed significantly from the 2006 photograph.	Surrounding area does not appear to have changed significantly from the 2006 photograph.
2012	Site does not appear to have changed significantly from the 2009 photograph.	Similar in appearance to the 2009 photograph. The residence is no longer present northwest of the site in the open vegetated field.
2014	Site does not appear to have changed significantly from the 2012 photograph.	Surrounding area does not appear to have changed significantly from the 2012 photograph.

Appendix B provides copies of historical aerial photographs of the site and surrounding properties via Google Earth Pro and the AHTD.

Available regulatory compliance and hazardous material and waste information are provided below in Section 2.4.2 and Section 2.5.2.

2.4.2 Regulatory Compliance

Except as otherwise referenced, the following information was compiled using cross-referenced ADEQ files and report documentation.

A review of the ADEQ PDS indicated that one (1) AFIN (57-00259) is associated with the Street & Performance site. The North American Industry Classification System (NAICS) Code for the ADEQ-issued permits for the Street & Performance site is listed as 332813: Electroplating, Plating, Polishing, Anodizing, and Coloring.

Environmental regulations pertinent to automotive part and automobile engine manufacturing and plating industries include: the Clean Air Act (CAA), the Clean Water Act (CWA), and RCRA. Information relevant to each of these regulatory categories is provided below.

CAA

A review of the ADEQ PDS indicated that Street & Performance had no ADEQ-issued air permits; therefore, no air permit violations were found in ADEQ records.

Additional air emissions information is provided in Section 3.4, Air Migration Pathway.

CWA

Requirements established under the CWA are potentially relevant to a facility such as Street & Performance. Such requirements include spill prevention, control and countermeasure plans, and stormwater pollution prevention plans.

A review of the ADEQ PDS indicated that Street & Performance had no ADEQ-issued water permits; however, a compliance investigation conducted on April 10, 2009 revealed that an Industrial Stormwater Permit was needed for the site.

As stated in Section 2.4.1, the Street & Performance site had water violations.

RCRA

Hazardous wastes are covered by RCRA Subtitle C, while non-hazardous wastes are covered under RCRA Subtitle D. Hazardous materials become hazardous wastes if and when they are discarded or intended to be discarded. According to ADEQ records, the Street & Performance site was a LQG of hazardous waste from 2001 to its closing in 2016. Prior to 2001, Street & Performance registered as a SQG of hazardous waste.

2.5 Source Characterization

Sections 2.5.1 through 2.5.4 provide source characterization information.

2.5.1 Source Descriptions

Based upon site reconnaissance and ADEQ records, the following sources are or were located on the Street & Performance site: a former atmospheric evaporator, a plating shop floor sump, a 500-gallon chromium waste tank, a 500-gallon cyanide waste tank, five (5) copper plating baths totaling approximately 700 gallons, five (5) approximately 500-gallon nickel plating baths, three (3) approximately 500-gallon nickel rinse tanks, one (1) approximately 500-gallon chromium plating tank, three (3) approximately 500-gallon chromium rinse tanks, one (1) approximately 500-gallon cyanide plating tank, one (1) 1,800-gallon batch treatment tank that formerly contained lead contaminated water, one (1) approximately 500-gallon copper rinse tank, two (2) approximately 500-gallon

nitric acid and water plating tanks, four (4) approximately 500-gallon soap tanks, four (4) approximately 500-gallon rinse tanks, one (1) approximately 120-gallon nitric acid plating tank, one (1) approximately 500-gallon caustic soda tank, one (1) approximately 500-gallon sodium cyanide and sodium hydroxide tank, one (1) approximately 500-gallon sodium cyanide and sodium hydroxide rinse tank, one (1) approximately 500-gallon Techmatic A139 tank, one (1) approximate 500-gallon Techmatic A129 rinse tank, a former pile of approximately 2,000 pounds of foundry sand from nickel and aluminum casting, a former 20-cubic yard roll-off container approximately half-full of foundry sand from nickel and aluminum casting, an unknown former quantity of used fluorescent lamps, numerous former 55-gallon drums and small-quantity containers holding various contaminants, a chromium solution formerly covering the floor of the "Rectifier Room," and the former approximately 968 square foot area of lead and chromium contaminated soil between the two (2) main buildings.

Section 2.5.2 below provides additional relevant hazardous substance, pollutant, or contaminant information.

2.5.2 Evidence of Hazardous Substance, Pollutant, or Contaminant

Evidence of potential hazardous substances, pollutants, or contaminants observed during this PA investigation included the following:

- Staining in the shape of rings on the Concrete Storage Area indicative of former 55-gallon drums;
- Multiple areas of disturbed soil and gravel located throughout the site, primarily on the east portion;
- Debris including scrap metal, wood pallets, lumber, and tires located throughout the site, primarily on the east portion;
- The burn pile located in a vegetated area on the east portion of the site;
- The two (2) empty approximately 250-gallon plastic totes on the northeast portion of the site; and
- The approximately six (6) inch diameter plastic pipe extending underground on the northeast portion of the site.

The following historical occurrences would constitute as evidence of potential hazardous substances, pollutants, or contaminants:

- A violation in 1999 for failing to label or mark clearly containers used for storage of used oil with the words "Used Oil";

- The two (2) rinse water tanks that had been dumped every week outside a building on the site and the corresponding soil samples with high levels of chromium, lead, and barium;

- The complaint in 2007 regarding a rinse water tank or a nickel-chromium plating bath tank that had been emptied into a box drain on the site that leads directly to the city's water system and the corresponding analytical sampling results from this drain indicating elevated levels of chromium;

- The CAO (LIS 08-040) entered on June 9, 2008, regarding numerous hazardous waste management violations;

- Violations in 2009 regarding an Industrial Stormwater Permit that was needed for the site and a pile of waste sand and a burn pile that needed to be removed from the site and properly disposed;

- The Complaint Investigation and subsequent CEI in 2011 that revealed approximately 115 55-gallon drums containing hazardous waste, some of which had been on-site since 2009, and numerous instances of significant noncompliance;

- The CEI in 2013 which revealed that Street & Performance had stored 132 containers of hazardous waste on-site for greater than ninety (90) days and numerous additional compliance violations;

- The CEI in 2016 that revealed numerous additional instances of significant noncompliance;

- The Emergency Order for remedial actions in 2016 resulting in approximately 199,320 pounds of abandoned waste being characterized and removed from the site;

- The historical use of numerous waste tanks, rinse tanks, plating tanks, and other aboveground storage tanks (ASTs) holding various contaminants on-site; and

- The historical use of an unknown quantity of 55-gallon drums and small-quantity containers holding various contaminants.

Street & Performance stored materials and generated potential waste containing the following contaminants on-site: methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen

peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents. The existence of these substances historically on-site is evidence of hazardous substances, pollutants, or contaminants.

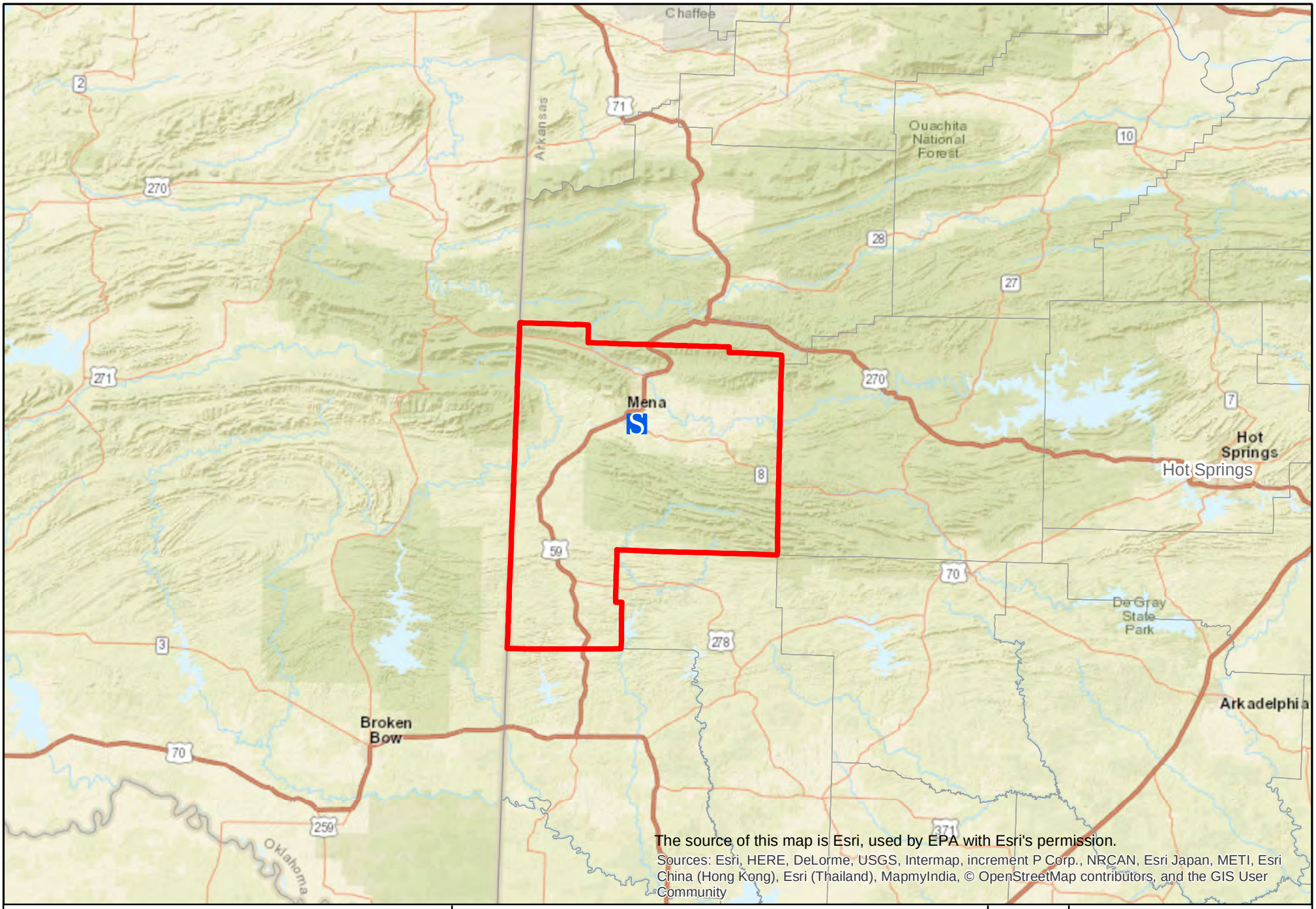
2.5.3 Source Containment Features

Source containment features that are or were located at the Street & Performance site include: the two (2) main buildings, the small metal-sided shed, a former atmospheric evaporator, a plating shop floor sump, a 500-gallon chromium waste tank, a 500-gallon cyanide waste tank, five (5) copper plating baths totaling approximately 700 gallons, five (5) approximately 500-gallon nickel plating baths, three (3) approximately 500-gallon nickel rinse tanks, one (1) approximately 500-gallon chromium plating tank, three (3) approximately 500-gallon chromium rinse tanks, one (1) approximately 500-gallon cyanide plating tank, one (1) 1,800-gallon batch treatment tank that formerly contained lead contaminated water, one (1) approximately 500-gallon copper rinse tank, two (2) approximately 500-gallon nitric acid and water plating tanks, four (4) approximately 500-gallon soap tanks, four (4) approximately 500-gallon rinse tanks, one (1) approximately 120-gallon nitric acid plating tank, one (1) approximately 500-gallon caustic soda tank, one (1) approximately 500-gallon sodium cyanide and sodium hydroxide tank, one (1) approximately 500-gallon sodium cyanide and sodium hydroxide rinse tank, one (1) approximately 500-gallon Techmatic A139 tank, one (1) approximately 500-gallon Techmatic A129 rinse tank, a former 20-cubic yard roll-off container approximately half-full of foundry sand from nickel and aluminum casting, and numerous former 55-gallon drums and small-quantity containers holding various contaminants.

2.5.4 Waste Quantity or Source Size

Waste quantity and source size on the Street & Performance site exist in the form of a former atmospheric evaporator of unknown size, a plating shop floor sump, a 500-gallon chromium waste tank, a 500-gallon cyanide waste tank, five (5) copper plating baths totaling approximately 700 gallons, five (5) approximately 500-gallon nickel plating baths, three (3) approximately 500-gallon nickel rinse tanks, one (1) approximately 500-gallon chromium plating tank, three (3) approximately 500-gallon chromium rinse tanks, one (1) approximately 500-gallon cyanide plating tank, one (1) 1,800-gallon batch treatment tank that formerly contained lead contaminated water, one (1) approximately 500-gallon copper rinse tank, two (2) approximately 500-gallon nitric acid and water plating tanks, four (4) approximately 500-gallon soap tanks, four (4) approximately 500-gallon rinse tanks, one (1) approximately 120-gallon nitric acid plating tank, one (1) approximately 500-gallon caustic soda tank, one (1) approximately 500-gallon sodium cyanide and sodium hydroxide tank, one (1) approximately 500-gallon sodium cyanide and sodium hydroxide rinse tank, one (1) approximately 500-gallon Techmatic A139 tank, one (1) approximately 500-gallon Techmatic A129

rinse tank, a former pile of approximately 2,000 pounds of foundry sand from nickel and aluminum casting, a former 20-cubic yard roll-off container approximately half-full of foundry sand from nickel and aluminum casting, an unknown former quantity of used fluorescent lamps, numerous former 55-gallon drums and small-quantity containers holding various contaminants, an unknown quantity of chromium solution formerly covering the floor of the "Rectifier Room," and the former approximately 968 square foot area of lead and chromium contaminated soil between the two (2) main buildings.



The source of this map is Esri, used by EPA with Esri's permission.

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Street & Performance

County and Site Location

Figure 2-1

Legend:

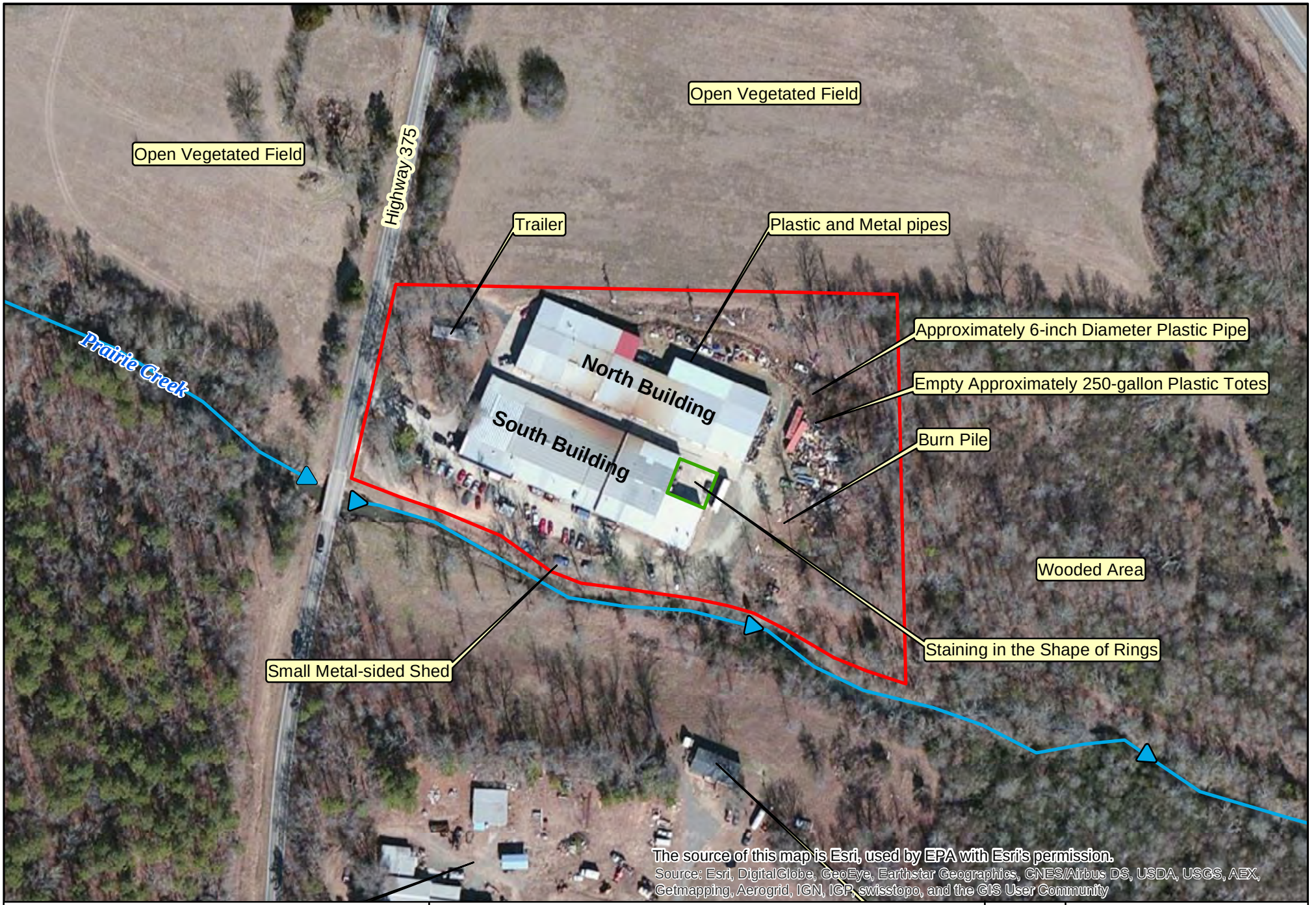
- Polk County
- Site Location

0 3.75 7.5 15 Miles

ADEQ ARKANSAS Department of Environmental Quality

AFIN: 57-00259

County and Site Location	
Location:	*Mena, Arkansas*
County:	*Polk*
Date:	*September 2017*



Street & Performance

Site Map-Aerial View

Figure 2-2

Legend:

- Site Boundary
- Concrete Storage Area
- Site Drainage
- Flow Direction

0 30 60 120 Feet

N

ADEQ ARKANSAS Department of Environmental Quality

AFIN: 57-00259

Site Map-Aerial View	
Location:	*Mena, Arkansas*
County:	*Polk*
Date:	*September 2017*

3.0 MIGRATION/EXPOSURE PATHWAYS AND TARGETS

Migration and exposure targets were calculated for this PA using the MARPLOT® desktop mapping system to search selected information from the USEPA, the United States Census Bureau, and the United States Geological Survey (USGS).

Sections 3.1 through 3.4 present information regarding migration and exposure pathways and targets.

3.1 Groundwater Migration Pathway

Sections 3.1.1 through 3.1.4 provide groundwater information for the Street & Performance site.

3.1.1 Local Geology and Hydrologic Setting

The following information was obtained from the Arkansas Geological Commission's *Stratigraphic Summary of Arkansas* and the 1993 Geologic Map of Arkansas.

Mena is located within the Ouachita Mountains physiographic province. The Ouachita Mountains are made up of complexly folded and faulted Paleozoic age sedimentary rocks that were originally deposited in mostly deep marine environments. A structural fabric that trends more or less east-west was produced by a continental collision during the late Paleozoic that pushed up this region. The folding was intricate at all scale levels and several local sequences, both complete and partial, are overturned. Throughout the area, compressional faulting is commonly expressed in the sequence. The Ouachita province, in a general sense, can be considered an anticlinorium with late Cambrian and early Ordovician age deposits being exposed in the center and Mississippian and Pennsylvanian age sediments exposed around the margins. The Gulf Coastal Plain and Mississippi Embayment cut off the area to the east.

The Street & Performance site is located within the Stanley Shale formation of the Ouachita Mountains physiographic province. The Stanley Shale formation is composed of dark gray shale interbedded with fine-grained sandstone. The Hot Springs Sandstone, a thick sandstone member, is found near the base of the sequence and an equivalent thin conglomerate/breccia occurs at the base of the unit in many other places. In various parts of the sequence, minor amounts of tuff, chert, and conglomerate have also been noted. The silty sandstones outside the Hot Springs Member are normally found in thin to massive beds separated by thick intervals of shale. The tuffs seem to be restricted to the lower part of the Stanley. Cherts are sometimes found in the middle and upper parts of the formation. The total thickness of the Stanley Shale formation ranges from 3,500 to over 10,000 feet thick (Ref. 5; Ref. 6).

The following information was obtained from the USGS *Ground Water Atlas of the United States*.

The Ouachita Mountains aquifer lies under the Street & Performance site. This aquifer has a north-to-south width of eighty (80) miles along the Arkansas-Oklahoma State line but progressively narrows eastward. The Ouachita Mountains aquifer consists mostly of shale, sandstone, and chert beds of Cambrian to Pennsylvanian age, all of which were deposited in deep-marine water conditions. The Ouachita Mountains are topographically characterized by alternating mountains and intermontane valleys to the north and a southernmost piedmont area. Bedrock units that underlie the Ouachita Mountains have been thrust faulted, are highly folded, and contain overturned formations. The piedmont area is underlain by shale and sandstone and borders the Coastal Plain in southwestern Arkansas. The surface of the area is generally flat to gently rolling but contains a series of low ridges and swells that strike east to west. High-permeability fracture zones in the Ouachita Mountains commonly form along bedding-plane partings, but are best developed where folding has caused differential movement along contacts between shale and sandstone beds. Fault zones, which often contain milky quartz veins, also function as local conduits for groundwater flow within the Ouachita Mountains aquifer (Ref. 7).

Groundwater in the vicinity of the Street & Performance site is believed to flow northeast toward Prairie Creek and the Ouachita River, with groundwater elevations influenced by topography. By searching through the USGS National Water Information System (Ref. 8), only one (1) well was found within a 4-mile radius of the Street & Performance site. The static groundwater elevations for this well ranged from 1.63 feet below ground surface (bgs) at the shallowest to 13.32 feet bgs at the deepest.

A radius search conducted using the Arkansas Natural Resource Commission (ANRC) Well Construction and Pump Installation Database indicated that six (6) groundwater wells are located within a 1-mile radius and 147 groundwater wells are located within a 4-mile radius of the Street & Performance site. The well depths recorded within a 4-mile radius range from four (4) feet to 310 feet bgs. Of the 147 ANRC wells recorded, ninety (90) are domestic wells, fifty-one (51) are of an unknown use, two (2) are test wells, two (2) are monitoring wells, one (1) is an irrigation well, and one (1) is a livestock watering well (Ref. 9).

No domestic wells within a 4-mile radius of the Street & Performance site were recorded as drinking water wells on the ANRC Well Construction and Pump Installation Database.

3.1.2 Releases and Potential Releases to Groundwater

The USGS, ANRC, and Arkansas Geological Survey are all entities which monitor Arkansas groundwater quality for various purposes; however, none of

these entities currently monitors groundwater quality within a 4-mile radius of the Street & Performance site.

Based on the ANRC groundwater well data, groundwater in the site vicinity appears to occur at fairly shallow depths. The historic practices at the Street & Performance site present the potential for releases to groundwater via soil contamination to have occurred.

Hazardous substances and chemicals used at the Street & Performance site include: methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents. The on-site presence of these chemicals and wastes for almost thirty (30) years indicates a potential threat of groundwater contamination through soil contamination.

The approximately six (6) inch diameter plastic pipe extending underground on the northeast portion of the site indicates the potential for releases to groundwater to have occurred. The historical use of numerous 55-gallon drums, small-quantity containers, waste tanks, rinse tanks, plating tanks, and other ASTs holding various contaminants on-site indicates the potential for releases to groundwater via soil contamination to have occurred. In addition, all staining, debris, and releases to the soil, as mentioned in Section 2.5.2, indicate the potential for releases to groundwater via soil contamination to have occurred.

No additional analytical or other evidence of releases to groundwater were documented during this PA investigation.

The following section discusses the groundwater migration pathway targets.

3.1.3 Groundwater Migration Pathway Targets

The MARPLOT® software was used to calculate populations within the radii discussed below. Using the coordinates of 34.564123º north latitude and -94.217089º west longitude, approximately 663 persons reside within a 1-mile radius and 8,513 persons reside within a 4-mile radius of the Street & Performance site. **Figure 3-1** provides a map depicting the 1-mile and 4-mile radii around the approximate site location.

Additional population apportionments and number of groundwater wells recorded on the ANRC Well Construction and Pump Installation Database within certain distance radii are presented below in **Table 3-1**.

Table 3-1. Street & Performance Site Population Distances and ANRC-recorded Groundwater Wells

Distance Radius (Miles)	Number of Residents	Number of Wells
0.25	2	0
0.50	208	2
1.0	663	6
2.0	3,754	41
3.0	7,119	88
4.0	8,513	147

The residents of Mena are served by Mena Water Utilities. The source of water for Mena Water Utilities is surface water, not groundwater. Mena Water Utilities gets its water from an intake in Irons Fork Lake located approximately 7.3 miles northeast of the Street & Performance site (Ref. 10). In addition, there are ANRC domestic groundwater wells within a 4-mile radius of the Street & Performance site; however, none were recorded as drinking water wells.

3.1.4 Groundwater Migration Pathway Conclusions

No records of groundwater sampling in the vicinity of the Street & Performance site were found during this PA investigation. The use of methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents presents the potential for contamination of groundwater via soil to have occurred.

The approximately six (6) inch diameter plastic pipe extending underground on the northeast portion of the site indicates the potential for releases to groundwater to have occurred. The historical use of numerous 55-gallon drums, small-quantity containers, waste tanks, rinse tanks, plating tanks, and other ASTs holding various contaminants on-site indicates the potential for releases to groundwater via soil contamination to have occurred. In addition, all staining, debris, and releases to the soil, as mentioned in Section 2.5.2, indicate the potential for releases to groundwater via soil contamination to have occurred.

The residents of Mena are served by Mena Water Utilities. The source of water for Mena Water Utilities is surface water, not groundwater. Mena Water Utilities gets its water from an intake in Irons Fork Lake located approximately 7.3 miles northeast of the Street & Performance site. In addition, there are ANRC domestic groundwater wells within a 4-mile radius of the Street & Performance site; however, none were recorded as drinking water wells.

According to the Arkansas Department of Health (ADH), which routinely monitors for constituents in drinking water according to Federal and State laws, the most current sample results for Mena Water Utilities had no violations (Ref. 11).

3.2 Surface Water Migration Pathway

Sections 3.2.1 through 3.2.4 provide surface water information for the Street & Performance site.

3.2.1 Hydrologic Setting

According to Google Earth Pro, the site is relatively flat with minor changes in elevation. The center of the site is approximately 1,025 feet above mean sea level.

Available sources reviewed during this PA investigation to determine the Street & Performance site hydrologic setting and surface water conditions included: Topozone topographic map for Dallas Creek in Polk County, Arkansas; USGS Arkansas Water Science Center databases; Federal Emergency Management Agency (FEMA) Map Service Center; ADEQ Office of Water Quality records; ADEQ's *2014 Integrated Water Quality Monitoring Assessment Report*; and the ANRC-Arkansas Watershed Information System.

The areas surrounding the Street & Performance site slope generally south-southeast toward Prairie Creek (Ref. 12).

Surface water runoff at the Street & Performance site is considered moderate based on soil type and a few areas of standing water observed during site reconnaissance. Surface water runoff flows directly into Prairie Creek along the south site boundary, and into unnamed drainage that runs throughout the site eventually flowing into Prairie Creek. Prairie Creek flows east along the south site boundary, eventually reaching the Ouachita River approximately 3.8 miles northeast of the Street & Performance site. The 15-mile Target Distance Limit (TDL) is estimated to occur in the Ouachita River.

The site has one (1) Probable Point of Entry (PPE). The PPE is located on the southeast corner of the site, where Prairie Creek flows east off-site.

A portion of the Street & Performance site is situated within the 100-year floodplain (Ref. 13).

According to the ADEQ's *2014 Integrated Water Quality Monitoring Assessment Report*, the Street & Performance site is located in Segment 2F (Ref. 14). Segment 2F is located in west-central Arkansas and covers most of Hot Spring, Garland, and Montgomery Counties and portions of Clark, Dallas, Pike, Yell,

Perry, Calhoun, and Ouachita Counties. It encompasses a 220-mile reach of the Upper Ouachita River and a seventy (70)-mile reach of the Caddo River. The major tributaries include the South Fork of the Ouachita River, Mazarn Creek, L'Eau Frais Creek, and Irons Fork Creek. Segment 2F contains three (3) major impoundments of the Ouachita River: Lake Ouachita, Lake Hamilton, and Lake Catherine. Segment 2F also contains an impoundment of the Caddo River, DeGray Reservoir.

The waters within Segment 2F have been designated as suitable for the propagation of fish and wildlife; primary and secondary contact recreation; and public, industrial, and agricultural water supplies. However, Chamberlain Creek and its tributaries receiving drainage from the MagCoBar pit mine were listed as not attaining the fisheries designated use, domestic water supply use, and the industrial and agriculture water supply uses, due to low pH values, elevated minerals, and elevated metals.

South Fork of the Caddo River and Caddo River downstream of the South Fork are not meeting water quality standards for copper and/or zinc. The source is assumed to be from abandoned open pit mining. In addition, Prairie Creek below the City of Mena does not meet the water quality standards for copper and turbidity due to surface erosion, including stormwater runoff from industrial sites in the watershed.

3.2.2 Releases and Potential Releases to Surface Water

As described in Section 2.5.2, the violation in 2009 regarding absence of an Industrial Stormwater Permit indicates the potential for releases to surface water to have occurred.

In addition, all staining, debris, and releases to the soil as mentioned in Section 2.5.2 indicate the potential for releases to surface water via soil contamination to have occurred.

3.2.3 Surface Water Migration Pathway Targets

The Street & Performance site lies within the Brier Creek-Prairie Creek watershed. The total area of this watershed covers 17,661.60 acres (27.28 square miles) and contains surface water area features of 0.28 square miles in the form of Lakes/Ponds and 0.08 square miles in the form of Streams/Rivers. The surface water linear feature is 32.95 miles in the form of Streams/Rivers. The population of the Brier Creek-Prairie Creek watershed was 6,321 persons in 2000, with a population density of 231.71 persons per square mile.

The Brier Creek-Prairie Creek watershed is encompassed by the Ouachita River Headwaters watershed area. The Ouachita River Headwaters watershed area encompasses 107,692.92 acres (166.33 square miles) and contains surface water

area features of 0.51 square miles in the form of Lakes/Ponds and 0.35 square miles in the form of Streams/Rivers. The surface water linear feature is 280.98 miles in the form of Streams/Rivers. The population of the Ouachita River Headwaters watershed area was 8,989 persons in 2000, with a population density of 54.04 persons per square mile (Ref. 15).

Appendix C contains ANRC-Arkansas Watershed Information System watershed maps and supporting documentation for the above information.

The Arkansas Natural Heritage Commission (ANHC) maintains a database on the status and location of threatened or endangered species and significant ecological communities in Arkansas. An occurrence of an element of special concern represents a location, which provides habitat for sensitive species (both State and Federal species), is an outstanding example of a natural community, or is a colonial bird nesting site.

According to the file review conducted by the ANHC for the Street & Performance site, no occurrences of an element of special concern have been recorded within a 1-mile radius of the site. Thirty-eight (38) occurrences of elements of special concern have been recorded within a 4-mile radius of the site. The Ozark Pigtoe, Arkansas Fatmucket, Mena Crayfish, Purple Lilliput, Lilliput, Tapered Pondhorn, little spectaclecase, Ringed Salamander, and Wolf's spike-rush are aquatic elements of special concern within a 4-mile radius of the site. A total of 530 occurrences of elements of special concern have been recorded within a 15-mile radius of the site (Ref. 16).

Figure 3-2 illustrates the approximate 15-mile radius delineation used by the ANHC for the database search for threatened and endangered species and significant ecological communities, and indicates the site's 15-mile TDL and other significant surface water migration pathway features. **Appendix D** contains a copy of the file review provided by the ANHC and supporting documentation for the above information.

The USEPA National Environmental Policy Act (NEPA) website, NEPAssist, was accessed to obtain surface water migration target information. According to NEPAssist, the closest wetland area is a Freshwater Emergent Wetland located approximately 6.4 miles downstream of the Street & Performance site along the Ouachita River. A second Freshwater Emergent Wetland is located approximately 8.0 miles downstream of the Street & Performance site, also along the Ouachita River. In addition, there are numerous Freshwater Forested/Shrub Wetlands along the Ouachita River within the site's 15-mile TDL (Ref. 17).

The residents of Mena are served by Mena Water Utilities. Mena Water Utilities gets its water from surface water; however, the intake is located in Irons Fork Lake which is approximately 7.3 miles northeast and upstream of the Street & Performance site.

3.2.4 Surface Water Migration Pathway Conclusions

The violation in 2009 regarding absence of an Industrial Stormwater Permit indicates the potential for releases to surface water to have occurred.

In addition, all staining, debris, and releases to the soil, as mentioned in Section 2.5.2, indicate the potential for releases to surface water via soil contamination to have occurred.

As stated in Section 3.1.3 and Section 3.2.3, the residents of Mena are served by Mena Water Utilities. Mena Water Utilities gets its water from surface water; however, the intake is located in Irons Fork Lake which is approximately 7.3 miles northeast and upstream of the Street & Performance site.

No occurrences of an element of special concern have been recorded by the ANHC within a 1-mile radius of the site.

3.3 Soil Exposure and Subsurface Intrusion Pathway

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey for Polk County, Arkansas, the soil map unit composition for the Street & Performance site is comprised primarily of the following soils (Ref. 18):

Kenn-Ceda complex, zero (0) to three (3) percent slopes, frequently flooded; and
Wetsaw Loam, one (1) to six (6) percent slopes.

Descriptions of these soils are summarized below (Ref. 19):

Kenn-Ceda complex, zero (0) to three (3) percent slopes, frequently flooded

> This well-drained soil is found in narrow flood plains in mountainous areas. Most areas are long and narrow in shape, and limited in acreage. These areas are predominantly used for woodlands and wildlife. This soil is comprised of approximately sixty (60) percent Kenn and similar soils, thirty (30) percent Ceda and similar soils, and ten (10) percent minor soils. The typical profile of Kenn soils is as follows: the surface layer is typically dark yellowish brown cobbly fine sandy loam approximately zero (0) to eight (8) inches thick; the subsoil consists of strong brown clay loam that extends to approximately thirty-nine (39) inches bgs, and brown very gravelly clay loam that extends to approximately fifty-one (51) inches bgs; and the underlying material is brown extremely cobbly loam that extends to approximately seventy-two (72) inches bgs. The typical profile of Ceda soils is as follows: the surface layer is typically dark brown very cobbly fine sandy loam approximately zero (0) to six (6) inches thick; the subsoil consists of brown very gravelly fine sandy loam that extends to approximately (20) inches bgs, dark yellowish brown extremely gravelly loam that extends to approximately thirty-nine (39) inches bgs, and dark yellowish brown extremely cobbly fine sandy loam that extends to approximately sixty-five (65) inches bgs. Available water capacity is high for Kenn soils and low for Ceda soils. Permeability is moderate for Kenn soils and rapid for Ceda soils. Surface runoff ranges from negligible to medium. The soil ranges from slightly acidic to very strongly acidic.

Wetsaw Loam, one (1) to six (6) percent slopes

> This soil is found on stream terraces, mainly in the northern part of the country. Areas of this soil are predominantly used for pasture and hayland. The surface layer is typically brown loam approximately (0) to (6) inches thick. The subsurface layer consists of yellowish brown loam that extends to approximately fourteen (14) inches bgs. The subsoil consists of yellowish brown loam that extends to approximately twenty (20) inches bgs, yellowish brown mottled clay loam that extends to approximately thirty-four (34) inches bgs, yellowish brown and light brownish gray mottled clay loam that extends to approximately forty-four (44) inches bgs, and yellowish brown and light gray mottled gravelly clay loam that extends to approximately seventy (70) inches bgs. Available water capacity is very high and permeability is slow. Surface runoff ranges from low to medium. This soil ranges from moderately acidic to very strongly acidic, except for areas where amendments have been applied.

Appendix E provides the NRCS Custom Web Soil Survey Report for the Street & Performance site.

Sections 3.3.1 through 3.3.4 provide additional soil information.

3.3.1 Physical Source Access Conditions

The Street & Performance site consists mostly of concrete, gravel, vegetated areas, and some areas of exposed soil. The North Building and South Building are metal-sided with concrete foundations. Both buildings are locked; however, the small metal-sided shed on the south portion of the site is unlocked. A concrete entrance driveway is located on the west side of the site and leads to an office area on the west portion of the South Building. Concrete parking areas are located on the south and west portions and gravel parking areas are located on the east and north portions of the site. The Street & Performance site is not fenced and is easily accessible to trespassers; however, little evidence of vandalism was present throughout the site during reconnaissance.

3.3.2 Actual or Potential Contamination Areas

Hazardous substances and chemicals used at the Street & Performance site include: methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents. The use of these materials and wastes on-site for almost thirty (30) years has the potential to have caused soil contamination.

As described in Section 2.5.2, the historical use of numerous 55-gallon drums, small-quantity containers, waste tanks, rinse tanks, plating tanks, and other ASTs holding various contaminants on-site indicates the potential for releases to the soil

to have occurred. The weekly dumping of two (2) rinse water tanks outside a building on-site indicates a release to the soil. The multiple areas of disturbed soil and gravel located throughout the site and the burn pile located in a vegetated area on the east portion of the site indicate the potential for releases to the soil to have occurred. In addition, all staining and debris mentioned in Section 2.5.2 indicate the potential for releases to the soil to have occurred.

In addition, there is the potential for subsurface intrusion into the buildings on-site and nearby buildings via soil or groundwater contamination.

3.3.3 Soil Exposure and Subsurface Intrusion Pathway Targets

There is a school located within a 1-mile radius of the Street & Performance site. In addition, a residential area is located approximately 0.20 miles east of the site, across Highway 8. The approximate distances to the closest residence, school, church, and daycare were obtained from Google Earth Pro and are as follows:

Residence – 160 feet to the south
Mena High School – 1.00 mile to the north
Bible Believers Baptist Church – 1.05 miles to the northwest
Jump Start Daycare – 1.20 miles to the northwest

As stated in Section 2.2, the Street & Performance site mostly consists of concrete, gravel, vegetated areas, and some areas of exposed soil. The North Building and South Building are metal-sided with concrete foundations. Both buildings are locked; however, the small metal-sided shed on the south portion of the site is unlocked and the potential exists for subsurface intrusion into these and other nearby buildings via soil or groundwater contamination. A concrete entrance driveway is located on the west side of the site and leads to an office area on the west portion of the South Building. Concrete parking areas are located on the south and west portions and gravel parking areas are located on the east and north portions of the site. The Street & Performance site is not fenced and is easily accessible to trespassers; however, little evidence of vandalism was present throughout the site during reconnaissance.

No occurrences of an element of special concern have been recorded within a 1-mile radius of the Street & Performance site.

The MARPLOT® mapping tool, which includes United States Census Bureau information for the year 2010, was used to calculate populations within the radii below. Using the coordinates of 34.564123º north latitude and -94.217089º west longitude, approximately 663 persons reside within a 1-mile radius of the Street & Performance site.

Figure 3-3 provides a topographical map depicting the 1-mile radius around the approximate site location. **Table 3-2** provides population apportionments within certain distance radii of the Street & Performance site.

Table 3-2. Street & Performance Site Population Distances

Distance Radius (Miles)	Number of Residents
0.25	2
0.50	208
1.0	663
2.0	3,754
3.0	7,119
4.0	8,513

Additional potential soil contamination targets include site visitors. Potential subsurface intrusion targets include nearby workers, residents, and trespassers into buildings on the site.

3.3.4 Soil Exposure and Subsurface Intrusion Pathway Conclusions

The use of methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents presents the potential for releases to the soil pathway from the Street & Performance site to have occurred.

As described in Section 2.5.2, the historical use of numerous 55-gallon drums, small-quantity containers, waste tanks, rinse tanks, plating tanks, and other ASTs holding various contaminants on-site indicates the potential for releases to the soil to have occurred. The weekly dumping of two (2) rinse water tanks outside a building on-site indicates a release to the soil. The multiple areas of disturbed soil and gravel located throughout the site and the burn pile located in a vegetated area on the east portion of the site indicate the potential for releases to the soil to have occurred. In addition, all staining and debris mentioned in Section 2.5.2 indicate the potential for releases to the soil to have occurred.

In addition, there is the potential for subsurface intrusion into the buildings on-site and nearby buildings via soil or groundwater contamination.

Multiple soil exposure and subsurface intrusion targets have been identified.

3.4 Air Migration Pathway

Sections 3.4.1 through 3.4.4 provide air migration pathway information for the Street & Performance site.

3.4.1 Climate

Mena is warm during summer when temperatures tend to be in the 70's and cold during winter when temperatures tend to be in the 40's. The average annual temperature is 59.0 degrees Fahrenheit (^{o}F), with an average annual low of 47.5^{o}F and an average annual high of 70.3^{o}F. The average annual precipitation is 58.39 inches. Precipitation is fairly evenly distributed throughout the year with the wettest month being May at an average of 6.65 inches (Ref. 20).

3.4.2 Releases and Potential Releases to Air

A review of the ADEQ PDS indicated that Street & Performance had no ADEQ-issued air permits; therefore, no air permit violations were found in ADEQ records.

The majority of the Street & Performance site consists of concrete, gravel, vegetated areas, and some areas of exposed soil. Although there are some areas of exposed soil on the site, no blowing particulates were noted during site reconnaissance.

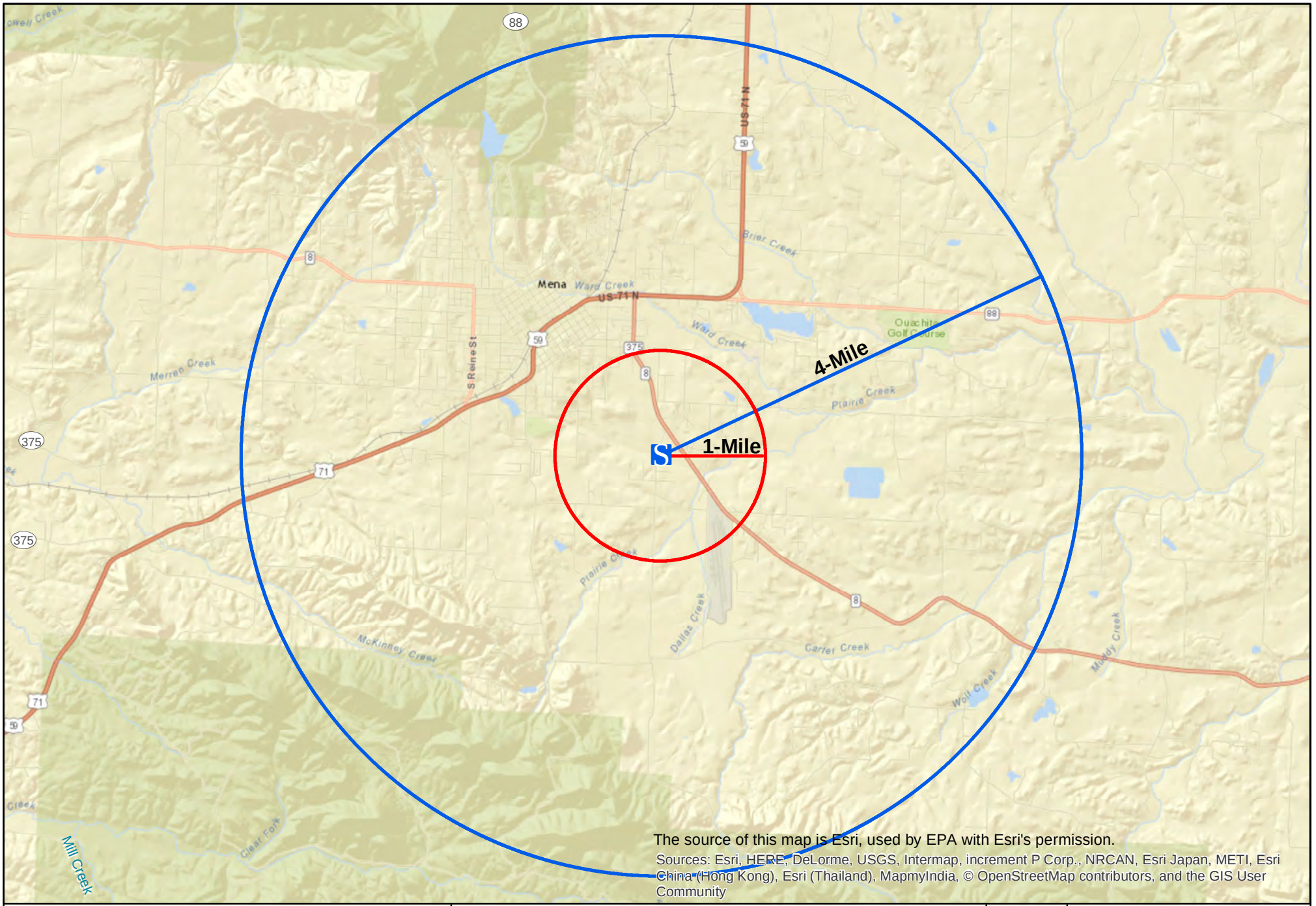
3.4.3 Air Migration Pathway Targets

Air migration pathway primary targets identified for the Street & Performance site include site visitors, site trespassers, workers directly south of the site, and residents directly south of the site. Secondary air migration pathway targets include nearby residents and workers at nearby businesses, schools, churches, and daycares.

3.4.4 Air Migration Pathway Conclusions

A review of the ADEQ PDS indicated that Street & Performance had no ADEQ-issued air permits; therefore, no air permit violations were found in ADEQ records.

Several air migration pathway targets associated with the Street & Performance site were identified.



The source of this map is Esri, used by EPA with Esri's permission.

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Street & Performance

1-Mile and 4-Mile Radius

Figure 3-1

Legend:

Site Location

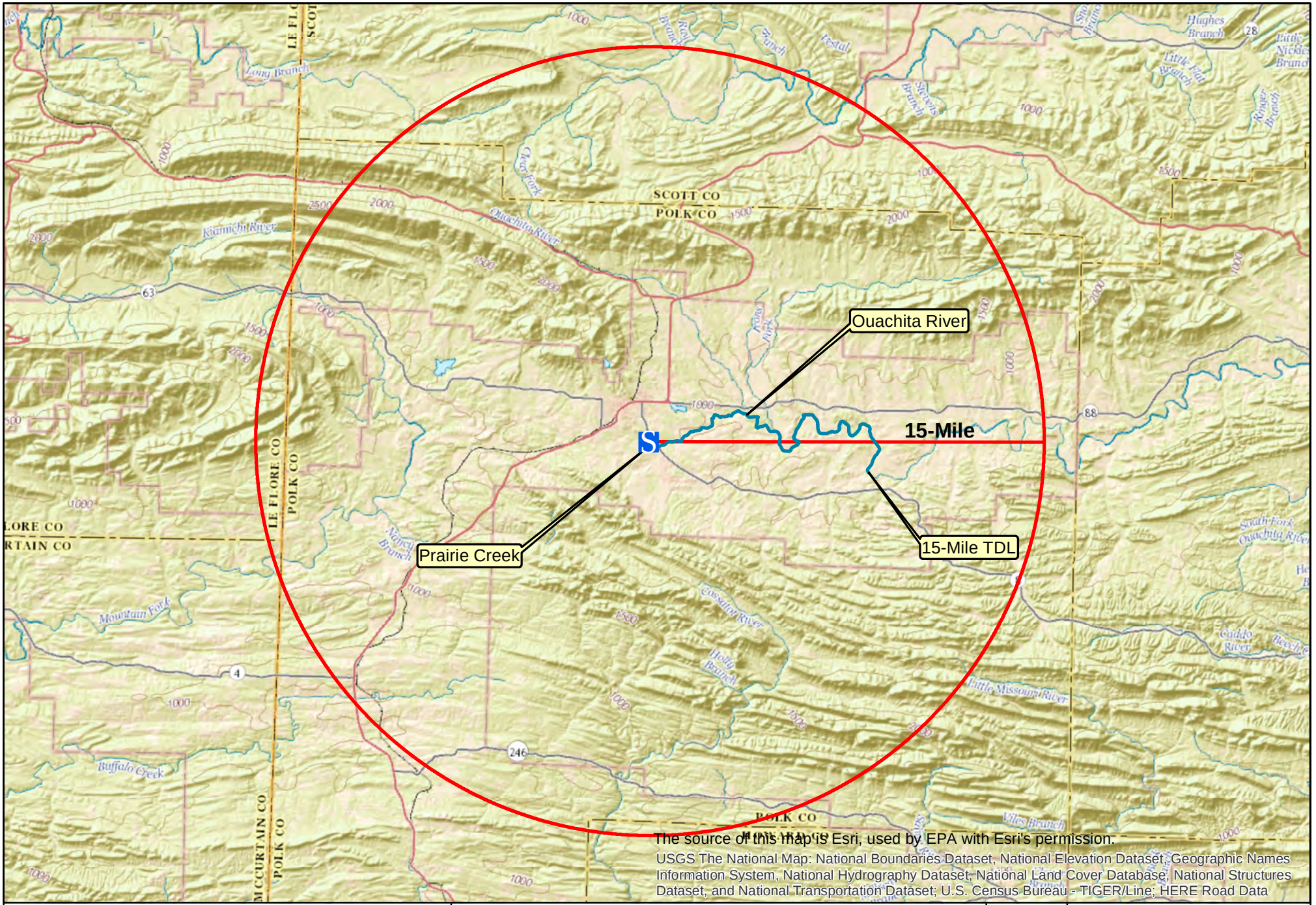
0 0.3 0.6 1.2 Miles

N

ADEQ ARKANSAS Department of Environmental Quality

1-Mile and 4-Mile Radius	
Location:	*Mena, Arkansas*
County:	*Polk*
Date:	*September 2017*

AFIN: 57-00259



The source of this map is Esri, used by EPA with Esri's permission:
USGS The National Map: National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data

Street & Performance

15-Mile Radius and 15-Mile TDL

Figure 3-2

Legend:

Site Location

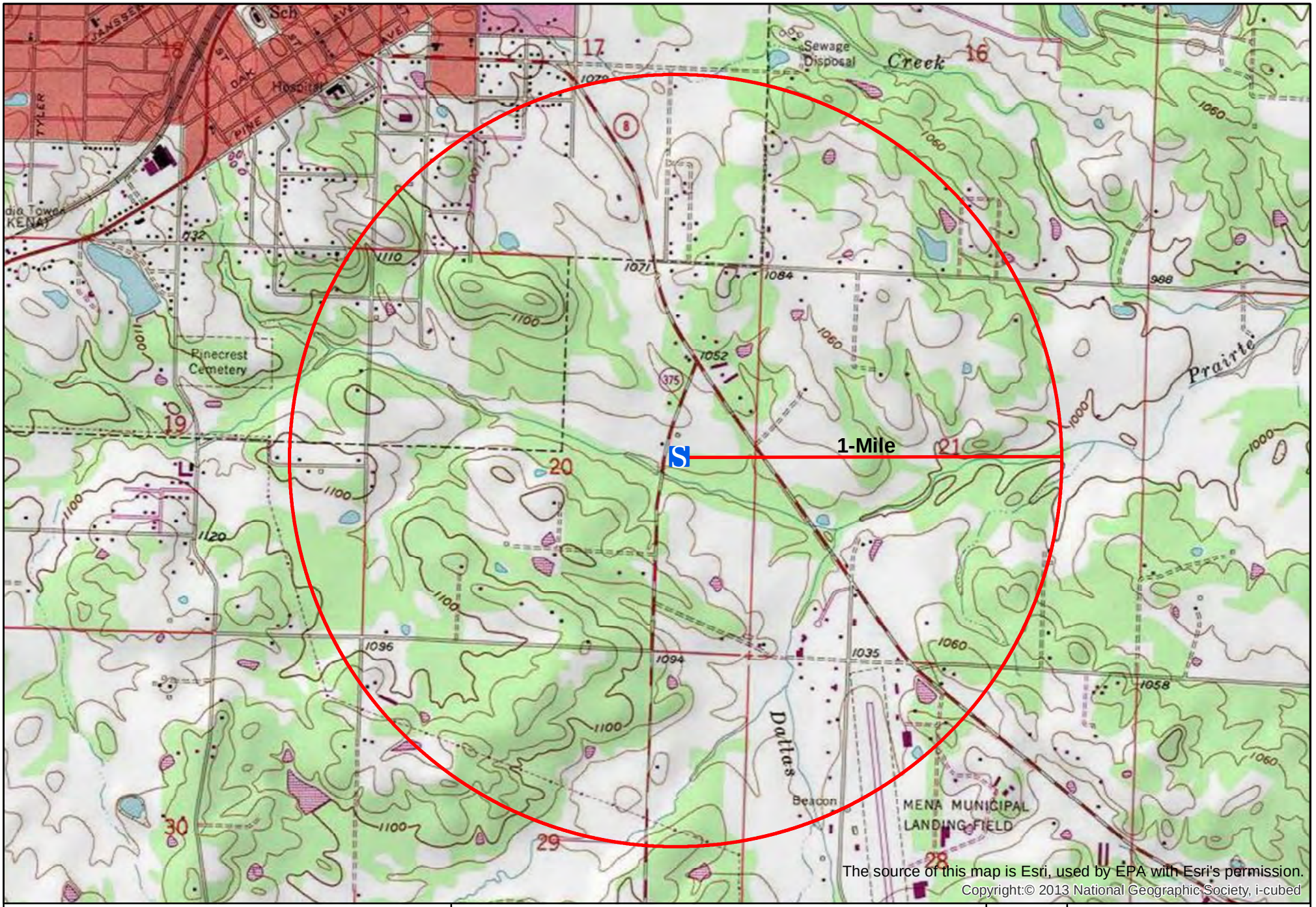
0 1.25 2.5 5 Miles

N

ADEQ ARKANSAS Department of Environmental Quality

AFIN: 57-00259

15-Mile Radius and 15-Mile TDL	
Location:	*Mena, Arkansas*
County:	*Polk*
Date:	*September 2017*



Street & Performance

1-Mile Radius Topographic

Figure 3-3

Legend:

Site Location

0 0.1 0.2 0.4 Miles

ADEQ ARKANSAS Department of Environmental Quality

1-Mile Radius Topographic	
Location:	*Mena, Arkansas*
AFIN: 57-00259	
County:	*Polk*
Date:	*September 2017*

4.0 SUMMARY AND CONCLUSIONS

The Street & Performance site is situated in a mixed residential and commercial area on an approximately 4.96-acre lot in Mena, Polk County, Arkansas. According to ADEQ records and AHTD historical aerial photographs, the original building was constructed and Street & Performance is presumed to have commenced operations on-site on February 10, 1987, when the facility became a hazardous waste operator. While in operation, Street & Performance manufactured and plated custom automotive parts and automobile engines. Manufacturing processes at the site included: aluminum casting and milling, spray coating, buffing, polishing, electroplating, and thermo-coating.

Due to market changes, Street & Performance ceased all operations on-site on October 28, 2016. According to Polk County property records, the site is currently owned by Street & Performance. Plans for future operations at the Street & Performance site could not be determined.

ADEQ submitted a Potential Hazardous Waste Site Discovery Form for the site to the USEPA Region 6 on August 23, 2017. A PA for this site was subsequently authorized by the USEPA Region 6 and the PA investigation results are detailed in this PA Report and summarized in the remainder of this section.

Available information reviewed during the course of this PA investigation indicated the following concerns at the Street & Performance site:

- The materials stored and potential hazardous waste generated containing the following chemicals on-site: methylene chloride, nickel chloride, ammonium bifluoride, sodium bisulfate, cyanide, sodium cyanide, sodium hydroxide, sodium hydrosulfide, sodium dimethyldithiocarbamate, sodium hypochlorite, nitric acid, sulfuric acid, hydrochloric acid, muriatic acid, phosphoric acid, anhydrous ferric chloride, dimethylamine, methyl ethyl ketone, 2-propanol, toluene, xylene, acetone, sodium metasilicate anhydrous, hydrogen peroxide, chromium, cadmium, barium, copper, nickel, lead, aluminum, zinc, and all known and suspected petroleum constituents;

- Staining in the shape of rings on the Concrete Storage Area indicative of former 55-gallon drums;

- Multiple areas of disturbed soil and gravel located throughout the site, primarily on the east portion;

- Debris including scrap metal, wood pallets, lumber, and tires located throughout the site, primarily on the east portion;

- The burn pile located in a vegetated area on the east portion of the site;

- The two (2) empty approximately 250-gallon plastic totes on the northeast portion of the site;

- The approximately six (6) inch diameter plastic pipe extending underground on the northeast portion of the site;

- Numerous occurrences of submitting Hazardous Waste Annual Reports and paying fees past required due dates;

- A violation in 1999 for failing to label or mark clearly containers used to store used oil with the words "Used Oil";

- The two (2) rinse water tanks that had been dumped every week outside a building on the site and the corresponding soil samples with high levels of chromium, lead, and barium;

- The complaint in 2007 regarding a rinse water tank or a nickel-chromium plating bath tank that had been emptied into a box drain on the site that leads directly to the city's water system and the corresponding analytical sampling results from this drain indicating elevated levels of chromium;

- The CAO (LIS 08-040) entered on June 9, 2008, regarding numerous hazardous waste management violations;

- Violations in 2009 regarding an Industrial Stormwater Permit that was needed for the site and a pile of waste sand and a burn pile that needed to be removed from the site and properly disposed;

- The Complaint Investigation and subsequent CEI in 2011 that revealed approximately 115 55-gallon drums containing hazardous waste, some of which had been on-site since 2009, and numerous instances of significant noncompliance;

- The CEI in 2013 which revealed that Street & Performance had stored 132 containers of hazardous waste on-site for greater than ninety (90) days and numerous additional compliance violations;

- The CEI in 2016 which revealed numerous additional instances of significant noncompliance;

- The Emergency Order for remedial actions in 2016 resulting in approximately 199,320 pounds of abandoned waste being characterized and removed from the site;

- The historical use of numerous waste tanks, rinse tanks, plating tanks, and other ASTs holding various contaminants on-site; and

- The historical use of an unknown quantity of 55-gallon drums and small-quantity containers holding various contaminants on-site.

The soil exposure and subsurface intrusion pathway and surface water migration pathway are of most concern due to the reasons listed above and the existence of targets. Potential soil exposure targets include site visitors and trespassers. Potential subsurface intrusion targets include nearby workers, residents, and trespassers into buildings on the site. Potential surface water migration pathways include surface water runoff flowing directly into Prairie Creek along the south site boundary and into unnamed drainage that runs throughout the site, eventually flowing into Prairie Creek. Prairie Creek flows east along the south site boundary, eventually reaching the Ouachita River approximately 3.8 miles northeast of the Street & Performance site.

The groundwater migration pathway is of indeterminate concern due to the potential for releases at the Street & Performance site; however, the source of water for the residents of Mena is surface water, not groundwater.

The air migration pathway is of least concern. Street & Performance had no ADEQ-issued air permits; therefore, no air permit violations were found in ADEQ records. Although there are some areas of exposed soil on the site, no blowing particulates were noted during site reconnaissance.

Based upon these findings, ADEQ recommends further investigation to more accurately define the nature and extent of sources at the Street & Performance site presenting potential threats to human health and the environment.

5.0 REFERENCES

1. Mena, Arkansas-City of Mena Information. Available online at http://www.city-data.com/city/Mena-Arkansas.html (accessed May 2017).

2. Google Earth Pro Information. Available online at http://www.google.com/earth/ (accessed May 2017).

3. Earth Point Tool for Google Earth. Available online at http://www.earthpoint.us/TownshipsSearchByLatLon.aspx (accessed May 2017).

4. Google Earth Pro and Arkansas Highway and Transportation Department. Historical aerial photographs for 1976; 1982; 1990; 1994; 2001; 2006; 2009; 2012; 2014.

5. Haley, B.R., Glick, E.E., Bush, W.V., Clardy, B.F., Stone, C.G., Woodward, M.B., and Zachary, D.L., 1993, Geologic Map of Arkansas: U.S. Geological Survey and Arkansas Geological Commission, 1:500,000 scale.

6. Arkansas Geological Commission. (1998/2004). *Stratigraphic Summary of Arkansas (Rev. ed.)*.

7. U.S Geological Survey. *Ground Water Atlas of the United States*. Available online at http://pubs.usgs.gov/ha/ha730/index.html (accessed May 2017).

8. U.S. Geological Survey. National Water Information System. Available online at http://waterdata.usgs.gov/ar/nwis/gw/ (accessed May 2017).

9. Arkansas Natural Resources Commission. State of Arkansas Report on Water Well Construction and Pump Installation Database Records. Available online at https://wise.er.usgs.gov/driller_db/index.php (accessed May 2017).

10. Mena Water Utilities. (2016). *Mena Water Utilities 2016 Annual Drinking Water Quality Report*.

11. Arkansas Department of Health. Arkansas Drinking Water Testing Results Database. Available online at http://www.healthy.arkansas.gov/eng/autoupdates/bacti/bactim.htm (accessed May 2017).

12. Topozone. Dallas Creek Topo Map in Polk County AR. Available online at http://www.topozone.com/arkansas/polk-ar/stream/dallas-creek/ (accessed May 2017).

13. Federal Emergency Management Agency Map Service Center. Available online at http://msc.fema.gov (accessed May 2017).

14. Arkansas Department of Environmental Quality. (2014). *2014 Integrated Water Quality Monitoring Assessment Report*.

15. Arkansas Natural Resources Commission. Arkansas Watershed Information System. Available online at http://watersheds.cast.uark.edu/ (accessed May 2017).

16. Osborne, Cindy, Arkansas Natural Heritage Commission Data Manager / Environmental Review Coordinator, Written correspondence with Katie Kreps, Arkansas Department of Environmental Quality, Elements of Special Concern for Polk County Site (May 30, 2017).

17. Environmental Protection Agency. National Environmental Policy Act database. Available online at http://nepassisttool.epa.gov/nepassist/entry.aspx (accessed August 2017).

18. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/ (accessed May 2017).

19. U.S. Department of Agriculture Soil Conservation Service in cooperation with Arkansas Agricultural Experiment Station. (2003). *Soil Survey of Polk County, Arkansas*.

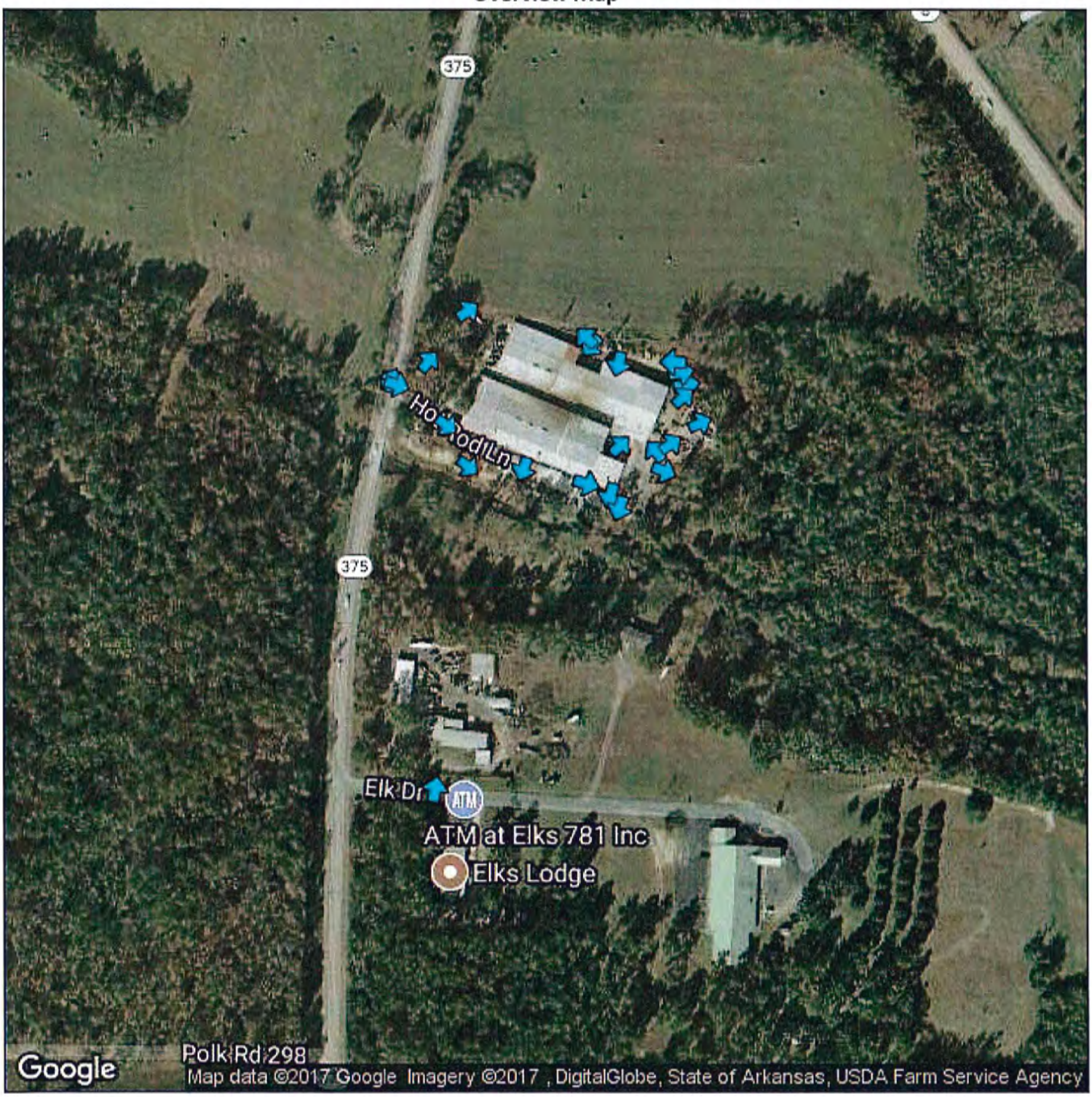
20. Mena, AR Weather. Available online at http://www.idcide.com/weather/ar/mena.htm (accessed May 2017).

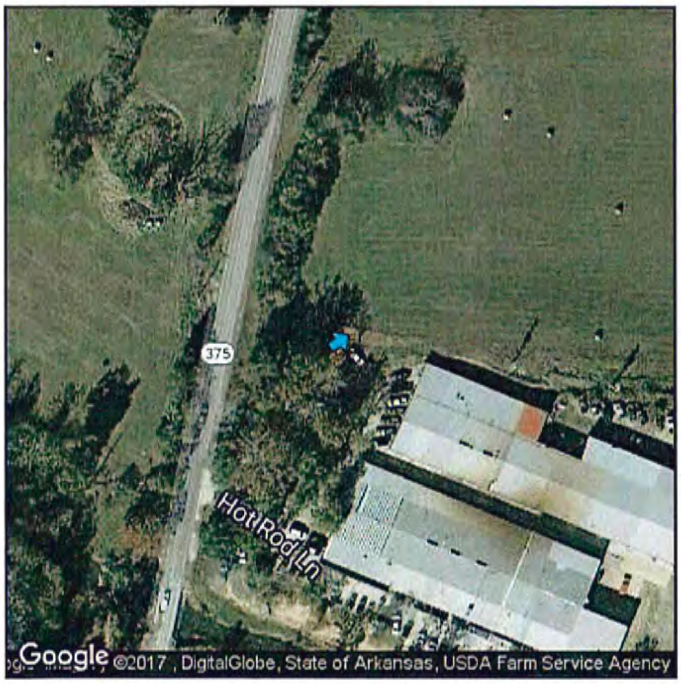
6.0 PHOTOGRAPHIC LOG

This section provides photographs taken at the Street & Performance site during site reconnaissance.

ADEQ
ARKANSAS
Department of Environmental Quality

Overview Map





Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	1
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:04:32 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0066.JPG
Subject	Open vegetated field north of the site

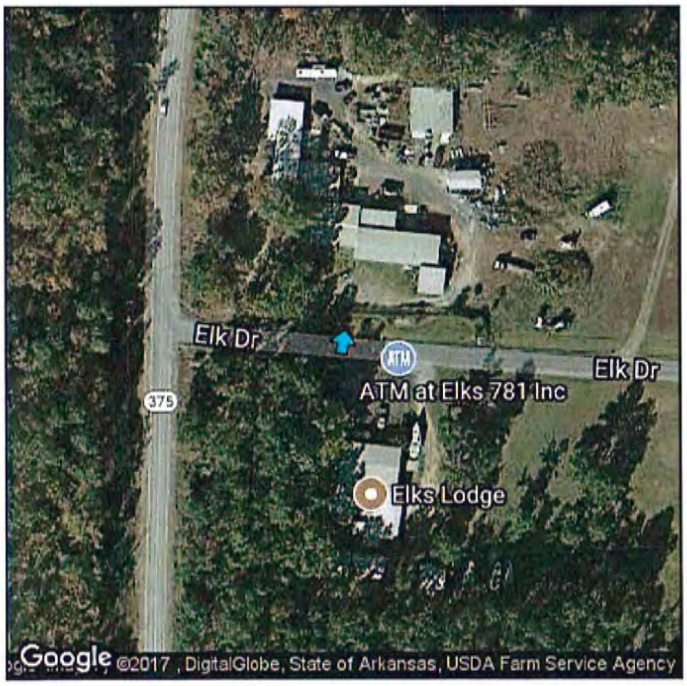
MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	2
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:08:13 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0059.JPG
Subject	Wooded area east of the site, two (2) empty approximately 250-gallon plastic totes, and a debris pile containing wood pallets, tires, and lumber on the northeast portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	3
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:11:31 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0034.JPG
Subject	Prairie Creek south of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.



Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	4
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:12:26 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0068.JPG
Subject	Unidentified commercial facility south of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	5
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:14:40 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0029.JPG
Subject	Highway 375 west of the site

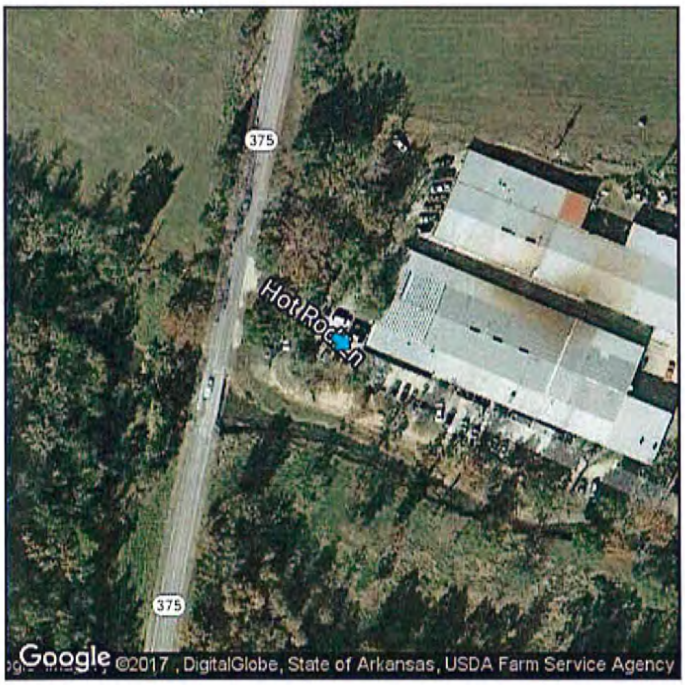
MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	6
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:16:56 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0028.JPG
Subject	Open vegetated field west of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	7
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:18:42 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0030.JPG
Subject	West sides of the North Building and South Building; Concrete entrance driveway and concrete parking area on the west portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.



Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	8
Photographer	Joshua Graham
Witness	Carolyn Pollard CP
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:21:32 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0032.JPG
Subject	South side of the South Building; Concrete parking area and small metal-sided shed on the south portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	9
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:22:44 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0045.JPG
Subject	Looking west toward the east sides of the North Building and South Building; Concrete Storage Area between the two (2) buildings; Gravel parking area on the west portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	10
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:24:48 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0053.JPG
Subject	North side of the North Building and gravel parking area on the north portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	11
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:26:05 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0037.JPG
Subject	Small metal-sided shed on the south portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	12
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:27:34 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0031.JPG
Subject	Trailer on the northwest portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	13
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:30:40 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0062.JPG
Subject	Staining in the shape of rings on the Concrete Storage Area on the east portion between the two (2) buildings

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	14
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:33:18 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0040.JPG
Subject	Disturbed soil and scrap metal debris on the southeast portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	15
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:38:40 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0050.JPG
Subject	Disturbed soil and gravel and debris including wood pallets and lumber on the northeast portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	16
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 12:47:50 PM
Make	RICOH
Model	G700 SE
File Name	RIMG0055.JPG
Subject	Disturbed gravel and debris including scrap metal, lumber, and pallets on the north portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	17
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 11:52:17 AM
Make	RICOH
Model	G700 SE
File Name	RIMG0044.JPG
Subject	Burn pile in a vegetated area on the east portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	18
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 11:53:06 AM
Make	RICOH
Model	G700 SE
File Name	RIMG0052.JPG
Subject	Approximately six (6) inch diameter plastic pipe extending underground on the northeast portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	19
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 11:53:33 AM
Make	RICOH
Model	G700 SE
File Name	RIMG0058.JPG
Subject	Small plastic and metal pipes extending from the northeast portion of the North Building

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	20
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 11:54:26 AM
Make	RICOH
Model	G700 SE
File Name	RIMG0049.JPG
Subject	Drainage on the northeast portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

Attributes	
Facility	Street & Performance, Inc.
Event	Preliminary Assessment
AFIN	57-00259
Photo Number	21
Photographer	Joshua Graham
Witness	Carolyn Pollard
Site Location	Mena, Arkansas
Date Time Stamp	5/2/2017 11:55:41 AM
Make	RICOH
Model	G700 SE
File Name	RIMG0056.JPG
Subject	Drainage on the north portion of the site

MAP DISCLAIMER: This map is intended to represent the general locations of the features displayed. This map should be for reference purposes only. All GPS locations are mapping grade in accuracy and are not post-processed.

APPENDIX A

PROPERTY RECORDS

Property Detail

Polk CountyPersonal Property & Real Estate Tax Records

Property Information

Parcel #:	0000-04531-0300
Tax Year/ Book:	2015 Delinquent
Legal:	PT NE SE
Property Type:	Real Estate
Owner:	STREET & PERFORMANCE % STREET & PERFORMANCE CO
Tax Payer:	**STREET & PERFORMANCE** P O BOX 1169 MENA, AR 71953
Site Address:	
Subdivision:	
Lot Block:	
S-T-R:	20-02-30
Acres:	4.96
Tax Status:	Non-Exempt

Hold Up!

This property has delinquent taxes

Receipts

Receipt #	Book	Tax Year	ReceiptDate	Cash Amt	Check Amt	Credit Amt	Total
9321	Current	2014	10/19/2015	$0.00	$8,628.06	$0.00	**$8,628.06**
9107	Current	2013	10/16/2014	$0.00	$8,209.08	$0.00	**$8,209.08**
9225	Current	2012	10/17/2013	$0.00	$7,591.35	$0.00	**$7,591.35**

9256	Current	2011	10/18/2012	$0.00	$7,600.03	$0.00	**$7,600.03**
9118	Current	2010	10/17/2011	$0.00	$7,440.61	$0.00	**$7,440.61**
8817	Current	2009	10/12/2010	$0.00	$5,907.43	$0.00	**$5,907.43**
8928	Current	2008	10/13/2009	$0.00	$6,823.87	$0.00	**$6,823.87**
9216	Current	2007	10/13/2008	$0.00	$5,286.15	$0.00	**$5,286.15**

For tax amount due, you must call the Collector's Office.

Polk County Collector: Scott Sawyer
: (479) 394-8110

APPENDIX B

HISTORICAL AERIAL PHOTOGRAPHS


1976
Arkansas Highway and Transportation Department


1982
Arkansas Highway and Transportation Department


1990
Arkansas Highway and Transportation Department


3/1994
N
Image U.S. Geological Survey
1994
434 ft
Google earth


3/2001
N
2001
Image U.S. Geological Survey
434 ft
Google earth


1/2006
N
2006
Image State of Arkansas
434 ft
Google earth


4/2009
N
2009
Image State of Arkansas
434 ft
Google earth

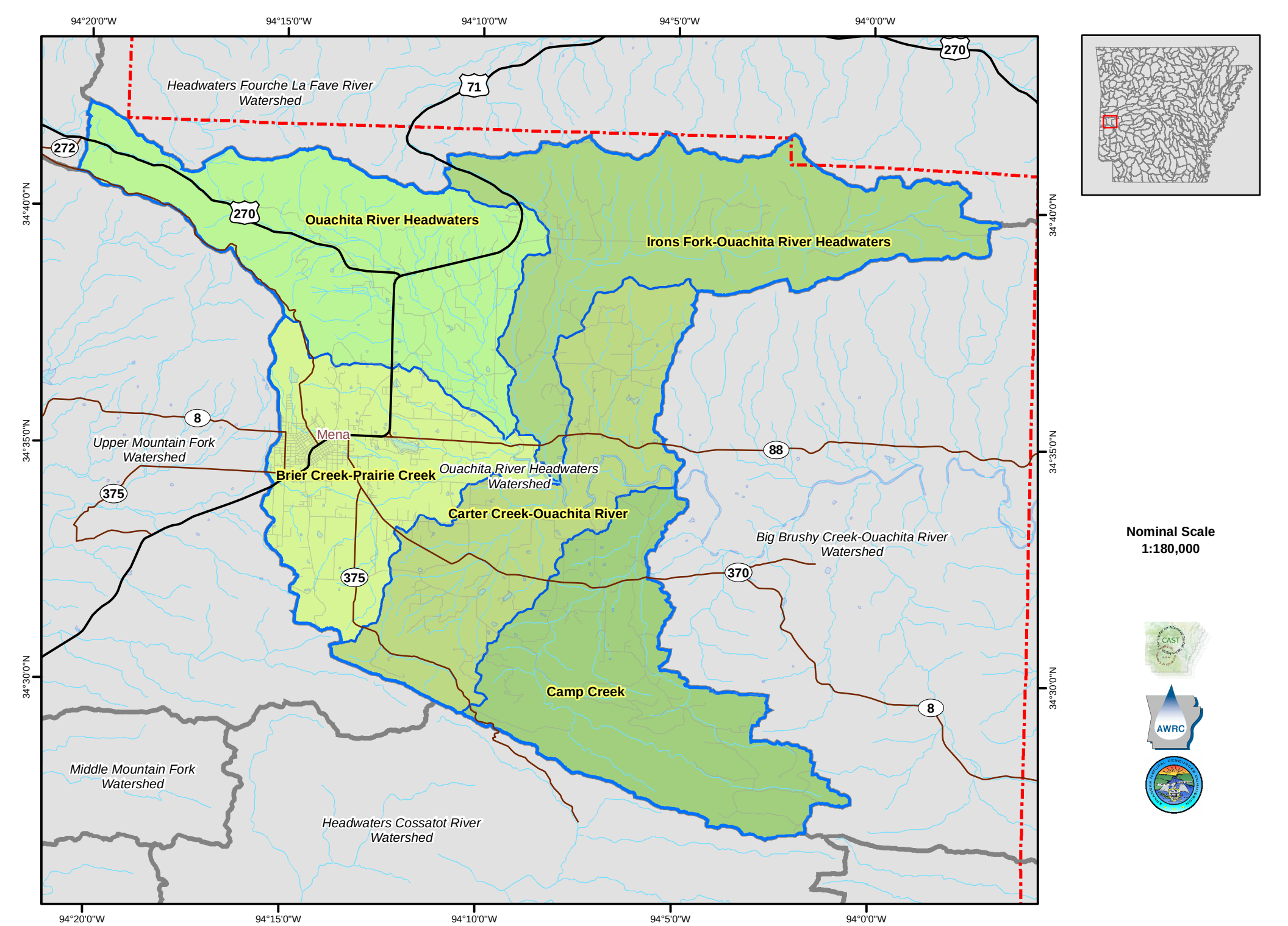

11/2012
N
2012
Google earth
434 ft


11/2014
1994
2014
N
435 ft
2014
Google earth

APPENDIX C

ARKANSAS NATURAL RESOURCES COMMISSION

WATERSHED MAPS AND INFORMATION



Ouachita River Headwaters

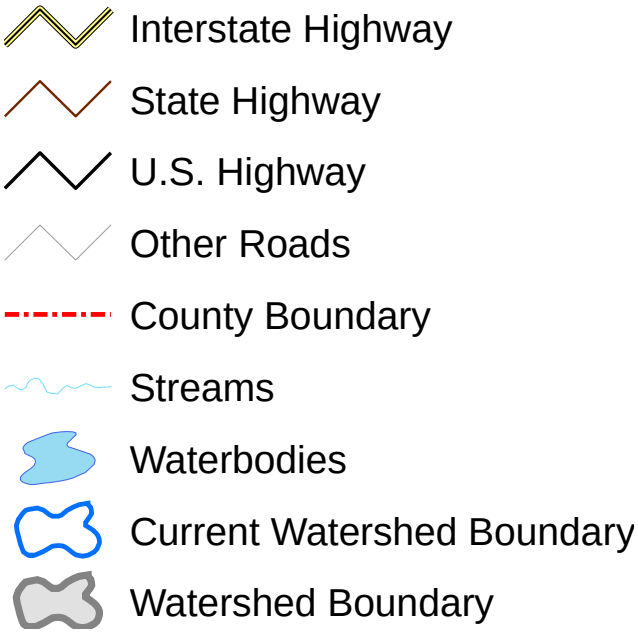
Sub-Watersheds (12-Digit HUCs)

N

Nominal Scale
1:180,000

Map produced by the Center for Advanced Spatial Technologies, 2006. Funding for the Arkansas Automated Reporting and Mapping System provided by the Arkansas 85th General Assembly through the Arkansas Natural Resources Commission.

Map Legend



For all watersheds that cross the Arkansas border, only the Arkansas portion of the watershed was used for mapping and statistical reporting.

All highway and road information provided by the Arkansas State Highway and Transportation Department. Publication date: August 29, 2006.

County boundaries provided by the Arkansas State Highway and Transportation Department. Publication date: January 1, 2001.

Watershed boundaries provided by the Arkansas State Office of the US Natural Resources Conservation Service. Publication date: 2005.

Streams and waterbodies provided by the US Geological Survey, National Hydrography Dataset. Publication date: 1999.

Placenames provided by the US Census Bureau as Census Designated Places. Publication date: 2000.

Sub-Watershed Summary (12 Digit HUC)

Brier Creek-Prairie Creek (080401010103)

Area Summary

Area - Square Miles:	**27.28**
Area - Acres:	**17661.30**

Elevation Summary

	Meters	Feet
Elevation Maximun:	**750.00**	**2460.00**
Elevation Minimum:	**277.00**	**909.00**
Elevation Average:	**345.00**	**1132.00**

Surface Water Area Features

	Sq. Miles
Streams/Rivers:	**.08**
Canals/Ditch:	**-.--**
Swamps/Marsh:	**-.--**
Lakes/Ponds:	**.28**
Reservoirs:	**-.--**

Surface Water Linear Features

	Miles
Streams/Rivers:	**32.95**
Canals/Ditch:	**-.--**
Pipelines:	**-.--**

Sub-Watershed Summary (12 Digit HUC)

Brier Creek-Prairie Creek (080401010103)

Area Summary

Area - Square Miles:	27.28
Area - Acres:	17661.30

Elevation Summary

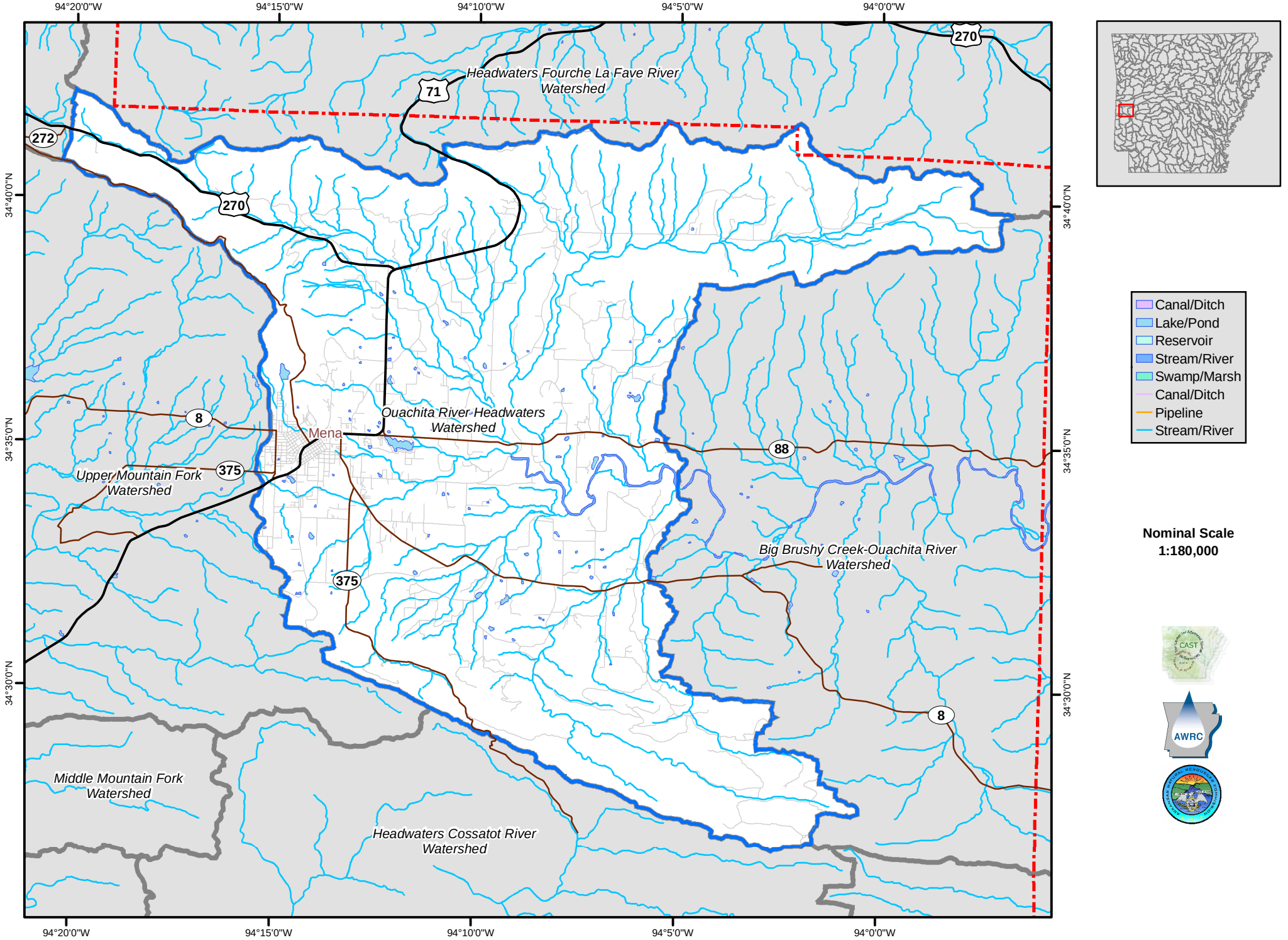
	Meters	Feet
Elevation Maximun:	750.00	2460.00
Elevation Minimum:	277.00	909.00
Elevation Average:	345.00	1132.00

Population Summary

Population Estimate for 1990:	5825.00
Population Density for 1990 (persons/sq mi):	213.53
Population Estimate for 2000:	6321.00
Population Density for 2000 (persons/sq mi):	231.71
Population Percent Change:	8.52%

Population Density Summary

Density	Area 1990	% of Total	Area 2000	% of Total	% Change
0	2.97	10.89%	2.32	8.50%	-21.89%
0-5	.85	3.12%	.39	1.43%	-54.12%
5-10	.60	2.20%	.77	2.82%	28.33%
10-25	2.68	9.82%	4.48	16.42%	67.16%
25-50	6.06	22.21%	3.40	12.46%	-43.89%
50-100	6.62	24.27%	7.20	26.39%	8.76%
100-500	4.53	16.61%	5.61	20.56%	23.84%
500-1000	1.52	5.57%	1.52	5.57%	.00%
> 1000	1.23	4.51%	1.37	5.02%	11.38%



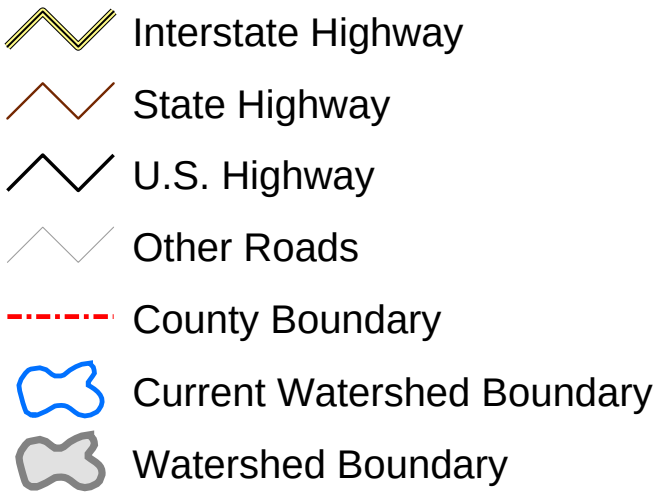
Nominal Scale
1:180,000

Ouachita River Headwaters
Hydrography

N

Map produced by the Center for Advanced Spatial Technologies, 2006. Funding for the Arkansas Automated Reporting and Mapping System provided by the Arkansas 85th General Assembly through the Arkansas Natural Resources Commission.

Map Legend



For all watersheds that cross the Arkansas border, only the Arkansas portion of the watershed was used for mapping and statistical reporting.

All highway and road information provided by the Arkansas State Highway and Transportation Department. Publication date: August 29, 2006.

County boundaries provided by the Arkansas State Highway and Transportation Department. Publication date: January 1, 2001.

Watershed boundaries provided by the Arkansas State Office of the US Natural Resources Conservation Service. Publication date: 2005.

Streams and waterbodies provided by the US Geological Survey, National Hydrography Dataset. Publication date: 1999. Source scale: 1:100,000.

Placenames provided by the US Census Bureau as Census Designated Places. Publication date: 2000.

Population data provided by the US Census Bureau as Census Blocks combined with Summary Tape File 1. Publication date: 2000.

Watershed Report
Ouachita River Headwaters
0804010101

The Center for Advanced Spatial Technologies at the University of Arkansas has developed the Arkansas Automated Reporting and Mapping System with funding from the Arkansas 85th General Assembly through the Arkansas Natural Resource Commission.
The 308 ten-digit watershed units and the 1556 twelve-digit watershed units were delineated by the Natural Resources Conservation Service, a division of the US Department of Agriculture.
For all watersheds that cross the Arkansas border, only the Arkansas portion of the watershed was used for mapping and statistical reporting.

Watershed Summary (10 Digit HUC)

Ouachita River Headwaters (0804010101)

Area Summary

Area - Square Miles:	166.33
Area - Acres:	107692.92

Elevation Summary

	Meters	Feet
Elevation Maximun:	816.00	2676.00
Elevation Minimum:	264.00	866.00
Elevation Average:	384.00	1260.00

Surface Water Area Features

	Sq. Miles
Streams/Rivers:	.35
Canals/Ditch:	-.--
Swamps/Marsh:	-.--
Lakes/Ponds:	.51
Reservoirs:	-.--

Surface Water Linear Features

	Miles
Streams/Rivers:	280.98
Canals/Ditch:	-.--
Pipelines:	-.--

Watershed Report
Ouachita River Headwaters
0804010101

The Center for Advanced Spatial Technologies at the University of Arkansas has developed the Arkansas Automated Reporting and Mapping System with funding from the Arkansas 85th General Assembly through the Arkansas Natural Resource Commission.
The 308 ten-digit watershed units and the 1556 twelve-digit watershed units were delineated by the Natural Resources Conservation Service, a division of the US Department of Agriculture.
For all watersheds that cross the Arkansas border, only the Arkansas portion of the watershed was used for mapping and statistical reporting.

Watershed Summary (10 Digit HUC)

Ouachita River Headwaters (0804010101)

Area Summary

Area - Square Miles:	166.33
Area - Acres:	107692.92

Elevation Summary

	Meters	Feet
Elevation Maximun:	816.00	2676.00
Elevation Minimum:	264.00	866.00
Elevation Average:	384.00	1260.00

Population Summary

Population Estimate for 1990:	7878.00
Population Density for 1990 (persons/sq mi):	47.36
Population Estimate for 2000:	8989.00
Population Density for 2000 (persons/sq mi):	54.04
Population Percent Change:	14.10%

Population Density Summary

Density	Area 1990	% of Total	Area 2000	% of Total	% Change
0	23.28	14.00%	21.64	13.01%	-7.04%
0-5	43.17	25.95%	35.88	21.57%	-16.89%
5-10	33.05	19.87%	20.54	12.35%	-37.85%
10-25	19.60	11.78%	35.35	21.25%	80.36%
25-50	25.05	15.06%	25.69	15.45%	2.55%
50-100	14.91	8.96%	17.18	10.33%	15.22%
100-500	5.84	3.51%	8.51	5.12%	45.72%
500-1000	1.57	.94%	1.54	.93%	-1.91%
> 1000	1.24	.75%	1.37	.82%	10.48%

APPENDIX D

ARKANSAS NATURAL HERITAGE COMMISSION FILE REVIEW

THE DEPARTMENT OF ARKANSAS HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

Arkansas Arts Council
*
Arkansas Historic Preservation Program
*
Arkansas State Archives
*
Delta Cultural Center
*
Historic Arkansas Museum
*
Mosaic Templars Cultural Center
*
Old State House Museum

ARKANSAS NATURAL HERITAGE COMMISSION

1100 North Street
Little Rock, AR 72201

(501) 324-9619
fax: (501) 324-9618
tdd: 711

e-mail:
info@naturalheritage.com
website:
www.naturalheritage.com

An Equal Opportunity Employer

Date: May 30, 2017
Subject: Elements of Special Concern
Polk County Site
ANHC No.: S-ADEQ-17-117

Ms. Katie Kreps
Office of Land Resources
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Dear Ms. Kreps:

Staff members of the Arkansas Natural Heritage Commission (ANHC) have reviewed our files for records indicating the occurrence of rare plants and animals, outstanding natural communities, natural or scenic rivers, or other elements of special concern within or near a site located at 34.564123° latitude and -94.217089° longitude in Polk County, Arkansas. We find no records at present time at or in the immediate vicinity of the listed coordinates.

Attached is a list of Elements of Special Concern known to occur within a fifteen-mile radius of the Polk County site. The list has been annotated to indicate those elements falling within a one and a four mile radius of the site. The following numbers of occurrences have been recorded within each review range:

One mile search area – 0 occurrences
Four mile search area – 38 occurrences
Fifteen mile search area – 530 occurrences

An occurrence represents a location, which provides habitat for sensitive species (both state and federal species), is an outstanding example of a natural community, or is a colonial bird nesting site. A legend is provided to help you interpret the codes used on this list. It may be of note that the Ouachita River falls within the 15-mile search radius. In addition to its designation as an Ecologically Sensitive Waterbody, this stream has also been recognized on the state's registry of Natural and Scenic Rivers and is listed on the Nationwide Rivers Inventory. The stream is also known to support the federally threatened Arkansas fatmucket (*Lampsilis powellii*) within the four-mile search radius.

Please keep in mind that the study area may contain important natural features of which we are unaware. Staff members of the Arkansas Natural Heritage Commission have not conducted a field survey of the study site. Our review is based on data available to the program at the time of the request. It should not be regarded as a final statement on the elements or areas under consideration. If you have questions or need additional information, please feel free to contact me.

Thank you for consulting us. It has been a pleasure to work with you on this study.

Sincerely,

Cindy Osborne

Cindy Osborne
Data Manager/Environmental Review Coordinator
Enclosure: Element list, legend

Arkansas Natural Heritage Commission
Department of Arkansas Heritage
Elements of Special Concern
Within 15-mile Radius of Review Site
Polk County, Arkansas (34.564123°, -94.217089°)

	Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank
	Animals-Invertebrates					
	Abacion wilhelminae	a millipede	-	INV	GNR	S1
	Alasmidonta marginata	Elktoe	-	INV	G4	S3
	Caecidotea montana	an isopod	-	INV	GNR	S1
	Caecidotea oculata	an isopod	-	INV	G2G3	S1
	Cyprogenia sp. cf aberti	Ouachita Fanshell	-	INV	GNR	S3
	Dendrocoelopsis americana	a cave obligate planarian	-	INV	G2G3	S1
	Derops divalis	a beetle	-	INV	GNR	S1
	Diplocardia meansi	an earthworm	-	INV	GNR	S2S3
✓	*Fusconaia ozarkensis*	Ozark Pigtoe	-	INV	G3G4	S3
✓	*Lampsilis powellii*	Arkansas Fatmucket	LT	SE	G2	S2
	Lampsilis spB cf hydiana	Red River Fatmucket	-	INV	GNR	S2
	Lirceus garmani	an isopod	-	INV	GNR	S1
✓	*Orconectes menae*	Mena crayfish	-	INV	G3	S3
	Procambarus reimeri	Irons Fork burrowing crayfish	-	INV	G1	S1
	Procambarus tenuis	Ouachita Mountain crayfish	-	INV	G3	S2
	Ptychobranchus occidentalis	Ouachita Kidneyshell	-	INV	G3G4	S3
	Stenotrema pilsbryi	Rich Mountain slitmouth	-	INV	G2	S2
✓	*Stenotrema unciferum*	Ouachita slitmouth	-	INV	G2	SNR
	Stygobromus montanus	Mountain Cave Amphipod	-	INV	G1G2	S1?
✓	*Toxolasma lividum*	Purple Lilliput	-	INV	G3Q	S3
✓	*Toxolasma parvum*	Lilliput	-	INV	G5	S3
	Toxolasma texasiense	Texas Lilliput	-	INV	G4	S3
✓	*Uniomerus declivis*	Tapered Pondhorn	-	INV	G5Q	S2
	Uniomerus tetralasmus	Pondhorn	-	INV	G5	S2
✓	*Villosa lienosa*	little spectaclecase	-	INV	G5	S3
	Zealeuctra wachita	Ouachita needlefly	-	INV	G2	S1
	Animals-Vertebrates					
✓	*Ambystoma annulatum*	Ringed Salamander	-	INV	G4	S3
✓	*Crotalus atrox*	Western Diamond-backed Rattlesnake	-	INV	G5	S2S3
	Crotaphytus collaris	Eastern Collared Lizard	-	INV	G5	S2
	Etheostoma clinton	beaded darter	-	INV	GNR	S2
	Etheostoma pallididorsum	paleback darter	-	INV	G2	S2
	Eurycea quadridigitata	Dwarf Salamander	-	INV	G5	S3
	Hemidactylium scutatum	Four-toed Salamander	-	INV	G5	S2
	Lythrurus snelsoni	Ouachita shiner	-	INV	G3G4	S2
✓	*Myotis leibii*	eastern small-footed bat	-	INV	G4	S1
✓	*Myotis septentrionalis*	northern long-eared bat	LT	SE	G1G2	S1S2
	Notropis ortenburgeri	Kiamichi shiner	-	INV	G3	S3
	Notropis perpallidus	peppered shiner	-	INV	G3	S3
	Noturus taylori	Caddo madtom	-	INV	G1	S1
	Percina brucethompsoni	Ouachita darter	-	INV	G2?	S2

	Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank
	Percina pantherina	leopard darter	LT	SE	G2	S1
	Picoides borealis	Red-cockaded Woodpecker	LE	SE	G3	S1
	Plestiodon septentrionalis	Prairie Skink	-	INV	G5	S2
	Plethodon caddoensis	Caddo Mountain Salamander	-	INV	G2	S2
	Plethodon fourchensis	Fourche Mountain Salamander	-	INV	G2Q	S2
	Plethodon kiamichi	Kiamichi Slimy Salamander	-	INV	G2	S1
	Plethodon ouachitae	Rich Mountain Salamander	-	INV	G2G3	S2
	Setophaga cerulea	Cerulean Warbler	-	INV	G4	S3B
	Sonora semiannulata	Western Groundsnake	-	INV	G5	S1
	Sorex longirostris	southeastern shrew	-	INV	G5	S2
	Plants-Vascular					
	Acer saccharum var. leucoderme	chalk maple	-	INV	G5T5	S2S3
✓	*Amorpha canescens*	lead-plant	-	INV	G5	S1
	Amorpha ouachitensis	Ouachita indigo-bush	-	INV	G3Q	S3
	Amsonia hubrichtii	Ouachita bluestar	-	INV	G3	S3
	Apocynum x floribundum	hybrid dogbane	-	INV	GNA	S1
	Astragalus crassicarpus var. crassicarpus	purple ground-plum	-	INV	G5T5	S2
	Calamagrostis porteri ssp. insperata	Porter's reed grass	-	SE	G4T3	S1
	Calamovilfa arcuata	Cumberland sand-reed	-	INV	G2G3	S1
✓	*Cardamine angustata*	slender toothwort	-	INV	G5	S2
	Cardamine dissecta	fork-leaf toothwort	-	INV	G4?	S1
	Carex decomposita	cypress-knee sedge	-	INV	G3G4	S2
	Carex hitchcockiana	Hitchcock's sedge	-	INV	G5	S1S2
	Carex laevivaginata	smooth-sheath sedge	-	INV	G5	S2
✓	*Carex latebracteata*	Waterfall's sedge	-	ST	G3	S3
	Carex pensylvanica	Pennsylvania sedge	-	INV	G5	S3
	Carex scoparia var. scoparia	pointed broom sedge	-	INV	G5T5	S1S2
	Carex stricta	tussock sedge	-	INV	G5	S3
	Carex timida	timid sedge	-	INV	G2G4	S2S3
	Carex willdenowii	Willdenow's sedge	-	INV	G5	S1
	Cypripedium kentuckiense	Kentucky lady's-slipper	-	INV	G3	S3
	Deschampsia flexuosa	wavy hair grass	-	INV	G5	S2S3
	Draba aprica	open-ground whitlow-grass	-	ST	G3	S2
	Dryopteris celsa	log fern	-	INV	G4	S2
✓	*Eleocharis wolfii*	Wolf's spike-rush	-	INV	G3G5	S3
	Elymus churchii	Church's wild rye	-	INV	G2G3	S2?
	Elymus glaucus ssp. mackenzii	Mackenzie's blue wild rye	-	INV	G5TNR	S1
	Epilobium coloratum	willow-herb	-	INV	G5	S1
	Euphorbia ouachitana	Ouachita spurge	-	INV	GNR	S3
	Galium arkansanum var. pubiflorum	hairy-flower Arkansas bedstraw	-	INV	G5T2	S2
	Gaylussacia baccata	black huckleberry	-	INV	G5	S3
	Gratiola brevifolia	sticky hedge-hyssop	-	INV	G4	S3
✓	*Houstonia ouachitana*	Ouachita bluet	-	INV	G3	S3
	Hydrophyllum brownei	Browne's waterleaf	-	INV	G2	S2
	Ilex longipes	Georgia holly	-	INV	G5	S3
	Iris verna var. smalliana	dwarf iris	-	INV	G5T4T5	S2
✓	*Liatris compacta*	Ouachita blazing-star	-	INV	G3	S3
✓	*Liatris squarrosa var. glabrata*	smooth scaly blazing-star	-	INV	G5T5	S1
	Luzula acuminata var. carolinae	Carolina wood-rush	-	INV	G5T4T5	S2
	Ptilimnium nodosum	harperella	LE	INV	G2	S2

	Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank
	Quercus acerifolia	maple-leaf oak	-	ST	G1	S1
	Ribes cynosbati	prickly gooseberry	-	INV	G5	S2S3
✓	*Sanicula smallii*	Small's black-snakeroot	-	INV	G5	S3
	Scirpus polyphyllus	leafy bulrush	-	INV	G5	S2
✓	*Solidago ouachitensis*	Ouachita goldenrod	-	INV	G3	S3
	Stachys iltisii	Ouachita hedge-nettle	-	INV	G3?	S3
	Streptanthus maculatus ssp. obtusifolius	Arkansas twistflower	-	INV	G3T3Q	S3
✓	*Streptanthus squamiformis*	Ouachita twistflower	-	ST	G2G3	S2
	Tradescantia ozarkana	Ozark spiderwort	-	INV	G3	S3
	Trillium ozarkanum	Ozark trillium	-	INV	G3	S3
	Valerianella nuttallii	Nuttall's cornsalad	-	INV	G2?	S2
	Valerianella palmeri	Palmer's cornsalad	-	INV	G3	S3
	Veratrum woodii	Wood's false hellebore	-	INV	G5	S3
	Verbesina walteri	rayless crownbeard	-	INV	G4	S1
	Vernonia lettermannii	Letterman's ironweed	-	INV	G3	S3
	Xyris difformis var. difformis	bog yellow-eyed-grass	-	INV	G5T5	S2
	Special Elements-Natural Communities					
	Ouachita Montane Oak Forest		-	INV	GNR	SNR
	Ouachita Shale Glade and Barrens		-	INV	GNR	SNR
	Ozark-Ouachita Mesic Hardwood Forest		-	INV	GNR	SNR
	Ozark-Ouachita Shortleaf Pine-Oak Forest		-	INV	GNR	SNR
	Upland Headwater Stream-Ouachita Mountains		-	INV	GNR	SNR
	Upland Stream-Ouachita Mountains		-	INV	GNR	SNR
	Special Elements-Other					
	Colonial nesting site, water birds		-	INV	GNR	SNR
	Geological feature		-	INV	GNR	SNR

* - No elements of special concern have been recorded within a one-mile radius of the review site.

✓ - These elements of special concern have been recorded within a four-mile radius of the review site.

LEGEND

STATUS CODES

FEDERAL STATUS CODES

C = Candidate species. The U.S. Fish and Wildlife Service has enough scientific information to warrant proposing this species for listing as endangered or threatened under the Endangered Species Act.

LE = Listed Endangered; the U.S. Fish and Wildlife Service has listed this species as endangered under the Endangered Species Act.

LT = Listed Threatened; the U.S. Fish and Wildlife Service has listed this species as threatened under the Endangered Species Act.

-PD = Proposed for Delisting; the U.S. Fish and Wildlife Service has proposed that this species be removed from the list of Endangered or Threatened Species.

PE = Proposed Endangered; the U.S. Fish and Wildlife Service has proposed this species for listing as endangered.

PT = Proposed Threatened; the U.S. Fish and Wildlife Service has proposed this species for listing as threatened.

T/SA = E/SA Threatened (or Endangered) because of similarity of appearance.

STATE STATUS CODES

INV = Inventory Element; The Arkansas Natural Heritage Commission is currently conducting active inventory work on these elements. Available data suggests these elements are of conservation concern. These elements may include outstanding examples of Natural Communities, colonial bird nesting sites, outstanding scenic and geologic features as well as plants and animals, which, according to current information, may be rare, peripheral, or of an undetermined status in the state. The ANHC is gathering detailed location information on these elements.

WAT = Watch List Species; The Arkansas Natural Heritage Commission is not conducting active inventory work on these species, however, available information suggests they may be of conservation concern. The ANHC is gathering general information on status and trends of these elements. An "*" indicates the status of the species will be changed to "INV" if the species is verified as occurring in the state (this typically means the agency has received a verified breeding record for the species).

MON = Monitored Species; The Arkansas Natural Heritage Commission is currently monitoring information on these species. These species do not have conservation concerns at present. They may be new species to the state, or species on which additional information is needed. The ANHC is gathering detailed location information on these elememts

SE = State Endangered; this term is applied differently for plants and animals.

Animals – These species are afforded protection under Arkansas Game and Fish Commission (AGFC) Regulation. The AGFC states that it is unlawful to import, transport, sell, purchase, hunt, harass or possess any threatened or endangered species of wildlife or parts. The AGFC lists as endangered any wildlife species or subspecies endangered or threatened with extinction, listed or proposed as a candidate for listing by the U.S. Fish and Wildlife Service or any native species or subspecies listed as endangered by the Commission.

Plants – These species have been recognized by the Arkansas Natural Heritage Commission as being in danger of being extirpated from the state. This is an administrative designation with no regulatory authority.

ST = State Threatened; These species have been recognized by the Arkansas Natural Heritage Commission as being likely to become endangered in Arkansas in the foreseeable future, based on current inventory information. This is an administrative designation with no regulatory authority.

DEFINITION OF RANKS

Global Ranks

G1 = Critically imperiled globally. At a very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 = **Imperiled globally. At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.**

G3 = **Vulnerable globally. At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.**

G4 = **Apparently secure globally. Uncommon but not rare; some cause for long-term concern due to declines or other factors.**

G5 = **Secure globally. Common, widespread and abundant.**

GH = **Of historical occurrence, possibly extinct globally. Missing; known from only historical occurrences, but still some hope of rediscovery.**

GU = **Unrankable. Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.**

GX = **Presumed extinct globally. Not located despite intensive searches and virtually no likelihood of rediscovery.**

GNR = **Unranked. The global rank not yet assessed.**

GNA = **Not Applicable. A conservation status rank is not applicable.**

T-RANKS= **T subranks are given to global ranks when a subspecies, variety, or race is considered at the state level. The subrank is made up of a "T" plus a number or letter (1, 2, 3, 4, 5, H, U, X) with the same ranking rules as a full species.**

State Ranks

S1 = **Critically imperiled in the state due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors making it vulnerable to extirpation.**

S2 = **Imperiled in the state due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it vulnerable to extirpation.**

S3 = **Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.**

S4 = **Apparently secure in the state. Uncommon but not rare; some cause for long-term concern due to declines or other factors.**

S5 = **Secure in the state. Common, widespread and abundant.**

SH = **Of historical occurrence, with some possibility of rediscovery. Its presence may not have been verified in the past 20-40 years. A species may be assigned this rank without the 20-40 year delay if the only known occurrences were destroyed or if it had been extensively and unsuccessfully sought.**

SU = **Unrankable. Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.**

SX = **Presumed extirpated from the state. Not located despite intensive searches and virtually no likelihood of rediscovery.**

SNR = **Unranked. The state rank not yet assessed.**

SNA = **Not Applicable. A conservation status rank is not applicable.**

General Ranking Notes

Q = **A "Q" in the global rank indicates the element's taxonomic classification as a species is a matter of conjecture among scientists.**

RANGES= **Ranges are used to indicate a range of uncertainty about the status of the element.**

? = **A question mark is used to denote an inexact numeric rank.**

B = **Refers to the breeding population of a species in the state.**

N = **Refers to the non-breeding population of a species in the state.**

APPENDIX E

NATURAL RESOURCES CONSERVATION SERVICE

CUSTOM WEB SOIL SURVEY REPORT

Map Scale: 1:1,240 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Polk County, Arkansas
Survey Area Data: Version 15, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 5, 2010—Jul 27, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Polk County, Arkansas (AR113)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
19B	Kenn-Ceda complex, 0 to 3 percent slopes, frequently flooded	4.4	88.2%
37C	Wetsaw loam, 1 to 6 percent slopes	0.6	11.8%
Totals for Area of Interest		**5.0**	**100.0%**

Polk County, Arkansas

19B—Kenn-Ceda complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: m50w
Elevation: 300 to 1,000 feet
Mean annual precipitation: 45 to 65 inches
Mean annual air temperature: 49 to 72 degrees F
Frost-free period: 195 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Kenn and similar soils: 60 percent
Ceda and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kenn

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium derived from sandstone and shale

Typical profile

A - 0 to 8 inches: cobbly fine sandy loam
Bt - 8 to 39 inches: clay loam
2BC - 39 to 51 inches: very gravelly clay loam
2C - 51 to 72 inches: extremely cobbly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Ceda

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Gravelly alluvium derived from sandstone

Typical profile

A - 0 to 6 inches: very cobbly fine sandy loam
C1 - 6 to 20 inches: very gravelly fine sandy loam
C2 - 20 to 39 inches: extremely gravelly loam
C3 - 39 to 64 inches: extremely cobbly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Aquents

Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Polk County, Arkansas
Survey Area Data: Version 15, Sep 28, 2016

Polk County, Arkansas

37C—Wetsaw loam, 1 to 6 percent slopes

Map Unit Setting

National map unit symbol: m517
Elevation: 500 to 1,500 feet
Mean annual precipitation: 45 to 65 inches
Mean annual air temperature: 49 to 72 degrees F
Frost-free period: 195 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wetsaw and similar soils: 90 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wetsaw

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy alluvium derived from sandstone and shale

Typical profile

A - 0 to 6 inches: loam
E - 6 to 14 inches: loam
Bt1 - 14 to 20 inches: loam
Bt2 - 20 to 34 inches: clay loam
Bt3 - 34 to 44 inches: clay loam
2Bt4 - 44 to 72 inches: gravelly clay loam

Properties and qualities

Slope: 1 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Cupco

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Hydric soil rating: No

Data Source Information

Soil Survey Area: Polk County, Arkansas
Survey Area Data: Version 15, Sep 28, 2016