

## It's a Bird... It's a Plane... No Wait... It's a Total Eclipse of the Sun!



On Monday, August 21st, the moon passed between the sun and Earth casting a shadow that travelled across the country from coast to coast. It was the first total eclipse over the contiguous United States in 38 years. Here in Arkansas, HW employees at all four office locations enjoyed an extended lunch hour to view the solar eclipse. Some even celebrated the celestial event by eating a healthy lunch of moon pies and star crunch, while washing it all down with Sunny D! *HW*



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110 South 7th Street  
Van Buren, AR 72956  
479.474.1227 phone

211 Natural Resources Dr.  
Little Rock, AR 72205  
501.374.4846 phone

403 Garrison Ave., Ste. 101  
Fort Smith, AR 72901  
479.242.4685 phone

438 East Millisp Rd., Ste. 107  
Fayetteville, AR 72703  
479.455.2206 phone



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# HW HighLights

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## HW Team News



HW would like to congratulate Josh Durham, P.E. on his promotion to Senior Associate. Josh joined HW in 2009 following the completion of graduate studies at the University of Arkansas. In December 2014, he was promoted to the position of Associate, and with the opening of HW's office in Fayetteville in April 2016 transferred to that office to become its Manager. Josh and his wife, Sarah, reside in Fayetteville, Arkansas.



HW would like to welcome Wesley Lemonier to the HW Team. Prior to graduating from the University of Arkansas, Wes interned with HW the previous four (4) summers. During this time, he gained experience in surveying, construction inspection, and design. After receiving his BSCE in December 2016, he joined HW as a Staff Engineer. Wes and his wife, Madison, reside in Alma, Arkansas with their 2-month old son, Quade.

## Hawkins-Weir Engineers, Inc. Announces Opening of New Fort Smith Office

Hawkins-Weir Engineers, Inc. (HW), a full-service professional civil and environmental engineering consulting firm, is pleased to announce the opening of its newest office in Fort Smith, Arkansas. Located at 403 Garrison Avenue, Suite 101, in historic downtown Fort Smith, the new location will join HW's current offices in Van Buren, Little Rock, and Fayetteville, and demonstrates the firm's continued commitment to the professional engineering needs of Fort Smith, Sebastian County, and the surrounding cities of Greenwood, Lavaca, Huntington, and Barling. Larry E. Yancey, P.E., a Principal in the firm, will manage the HW Fort Smith office and will initially be joined by Chris Morris, E.I., Staff Engineer.

"With our newest office opening, the level of service that our River Valley clients have come to expect from HW can only grow stronger. We are proud to invest in the economic development of downtown Fort Smith and are excited to join its

historic neighborhood." said the company's President and Chief Executive Officer, Brett D. Peters, P.E.

Founded in Van Buren in 1980, HW provides a broad range of professional engineering services in water, wastewater, stormwater, streets and roadways, land planning and development, structural, surveying, and construction management to municipal, industrial and private enterprise clients. Seventy-five percent of HW's work involves design and construction management of water and wastewater projects for municipal clients. Says Peters, "Our business philosophy is simple: to provide the highest level of professional engineering services to meet our clients' individual needs regarding project budget and schedule. At HW, engineering client success is much more than a tag line. We measure our success by our clients' success on projects they entrust to us. Client service is the cornerstone of our business model." *HW*



Located at 403 Garrison Avenue, Suite 101, in historic downtown Fort Smith, the new HW office will be managed by Larry E. Yancey, P.E., a Principal of the firm.

## Record Rains & Landslide Prompt Transmission Line Project in Van Buren

May 2015 was a rainy month in western Arkansas. The National Weather Service reported 19.85 inches of rainfall in Fort Smith, which exceeded all records going back to 1883 and was a 14.38-inch departure from normal May rainfall. Out of 31 days in the month, measurable rain fell on 18 days with three individual days seeing rainfall amounts of 2.83, 2.94 and 3.96 inches, respectively. At the Van Buren river gauging station, the Arkansas River crested over 11 feet above flood stage on two separate occasions during the last six days of the month.

May was also a busy month for the Van Buren Municipal Utilities (VBMU), having to deal with failures on two adjacent trans-

mission lines within the Van Buren water distribution system near the 3.5 million-gallon Prospect Reservoir. Along with two other storage tanks, the Prospect Reservoir serves the central and southern portions of the Van Buren water system. Water flows south by gravity out of the Prospect tank through a 12-inch transmission line that was constructed in 1955. Water flows to the east through two parallel transmission lines, an 8-inch line constructed in 1925 and a 6-inch line constructed in 1893 as part of the original distribution system for Van Buren. Following a week of rainfall, the Utility discovered and repaired a break on the 6-inch transmission line on May 15. One week later, another break was discovered

and repaired on the 6-inch line, followed four days later by a break on the 8-inch line.

All of the transmission line breaks occurred on a steep and undeveloped hillside immediately below the Prospect Reservoir. While investigating the 8-inch line break, the Utility discovered that a landslide had occurred in the area due to the excessive May rainfall. Valves were installed on the 6 and 8-inch transmission lines to isolate the failed sections, effectively eliminating two of the three transmission lines serving the Prospect Reservoir.

In 2010, the VBMU had added a new 18-inch transmission line to its masterplan list of capital water system improvements, recognizing the need to provide redun-

dancy particularly in the hard to access area south of the Prospect Reservoir. In 2013, Hawkins-Weir Engineers (HW) completed a preliminary route study and cost estimate for construction of 3,000 linear feet of 18-inch transmission line that would allow the abandonment of the older 6 and 8-inch lines. The May 2015 line failures resulted in this project moving quickly up the list of priority projects for the Utility.

On June 26, 2015, the Federal Emergency Management Agency (FEMA) declared a major disaster for Arkansas due to severe storms, tornados, straight-line winds, and flooding during an incident period of May 7 to June 15, 2015. In July, the VBMU learned that disaster aid might

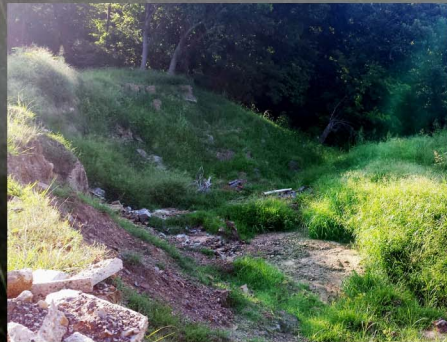
be available for distribution system repairs or replacement. FEMA later concurred that repairs were impractical because of the landslide, and in September 2015, FEMA approved the Utility's funding request for construction of the new 18-inch transmission line replacement.

Natural disaster assistance funding for 75% of the project came from the federal government through the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988. Another 12.5% of the project funding was provided by the Arkansas Department of Emergency Management, with the remaining 12.5% provided by the VBMU.

In August 2016, HW completed the design of the Prospect transmission line

project for the VBMU. Although adjustments were made to the proposed route to avoid the landslide area, sections of the new 18-inch transmission line still required construction on hillside grades approaching 25%.

Bidding and contract award were completed in October 2016, and construction commenced in December 2016. By May 2017, approximately 2,150 linear feet of 12 and 18-inch ductile iron transmission line were installed, including 88 feet of 18-inch long-span pipe across a major ravine midway through the project. The completed project was a success, and Van Buren gained a major capital improvement to its water distribution system. [HW](#)



Landslide area below the prospect Reservoir in 2015.



Installation of 18-inch isolation valve.



Construction of concrete piers for ravine crossing.



Completed ravine crossing prior to installation of erosion control matting.



Completed 18-inch pipe across ravine.



Revegetation of hillside with steep grades (25%) below the 3.5 million gallon Prospect Reservoir. All of the transmission line breaks occurred on this steep and undeveloped hillside.



Installation of 18-inch pipe near the Prospect Reservoir.



Installation of 18-inch pipe and gate valve.



Installation of 18-inch long-span pipe.



Ravine crossing following installation of erosion control matting.



Completed 18-inch pipe across ravine.



Pavement repairs along transmission line route on McKibbin Street on east end of project.