

## Anderson, Alan

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**From:** Heath Ward <hward@springdalewater.com>  
**Sent:** Wednesday, October 08, 2014 11:51 AM  
**To:** 'Charles Holt'; West, Alison; Anderson, Alan; brahana@uark.edu  
**Cc:** dsprouse@springdalear.gov; Chris Weiser; 'Patsy Christie'; 'Sam Goade'; Jennifer; Kim; Ricky; Shawn; Terry; Tim  
**Subject:** FW: Sanitary Sewer Repairs - Spring Creek

Mr. Anderson and All—

We believe after almost \$700,000 and several weeks of intense investigation and engineering, we have resolved the issue. Test indicate improvement at the site. There has been no negative effect on wildlife or fish at anytime. The area in question is vastly improved and it appears we have arrested the problem. We will continue to monitor. This was one of the largest bypass operations in the state of Arkansas. In the course of our work, we found several other problems related to I and I as well that we were able to address. Detecting any of this with a full flow would have been almost impossible, so there were other positive rehab projects that were done or planned as a result.

The karst geology made this somewhat of a challenge as well as the depth and age of the sewer system in this area.

We wish to thank ADEQ for its patience and help, the Department of Health for its advice, Dr. Van Brahana at the U of A for his time, and other local agencies that assisted. I also want to recognize the staff for their unrelenting efforts to solve this lingering problem, their professionalism and sense of duty for getting the job done safely and correctly.

We will continue to monitor the area under all conditions to make sure that we are not missing something. If you have any further questions, please call.

Thank you.

Heath

*Heath A. Ward  
Executive Director  
Springdale Water Utilities  
479-751-5751*

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**From:** Rick Pulvirenti [mailto:rpulvirenti@springdalewater.com]  
**Sent:** Wednesday, October 08, 2014 8:48 AM  
**To:** 'Chris Weiser'; 'Heath Ward'; dsprouse@springdalear.gov; 'Al Hanby'; 'Lynn Carver'; 'Paul E. Lawrence'; 'Terry McConnell'; 'Jennifer'; 'Kim'; 'Shawn'; 'Terry'; 'Tim'  
**Subject:** RE: Sanitary Sewer Repairs - Spring Creek

To all:

As of last Wednesday, October 1, 2014, bypass pumping operations have curtailed. The week prior, due to extreme infiltration, it was necessary to remove and replace an 18 feet deep manhole location adjacent to North Thompson. Previous attempts to seal the manhole were insufficient and temporary at best; therefore, excavation and

replacement proved to be the best measure to cut off flows from a spring that surfaced near the bottom of the excavation. A 3-inch pump was necessary to keep up with the flows encountered.

Bacteriological examinations of the water within the creek have indicated levels similar up-stream, down-stream, and in the location of the apparent discharge. Additional analysis should be available later today. Cloudiness, turbidity and odor have subsided. I'm still in a wait-and-see posture at this time, but I believe we may have corrected this bypass.

This section of large diameter gravity sewer is small in proportion to the overall length of interceptor sewer Springdale relies on to convey wastes from industrial, commercial and residential users, and with the condition of this segment, I'm certain these conditions may occur in other areas. Normally the clay soils abundant in our area help to seal exfiltration from migrating. Unfortunately, in Springdale with its many springs and subsurface channels these conditions may arise in the future due to the age, materials of construction, and condition of existing facilities.

If you have any questions or comments, please feel free in contacting me.

Sincerely,

Rick Pulvirenti, P.E.  
C.O.O. & Director of Engineering  
Springdale Water Utilities  
P.O. Box 769  
Springdale, AR 72764  
(479) 927-4183

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**From:** Chris Weiser [<mailto:chris@jv.com>]  
**Sent:** Wednesday, October 08, 2014 1:18 AM  
**To:** Rick Pulvirenti; 'Heath Ward'; [dsprouse@springdalear.gov](mailto:dsprouse@springdalear.gov); 'Al Hanby'; 'Lynn Carver'; 'Paul E. Lawrence'; 'Terry McConnell'; 'Jennifer'; 'Kim'; 'Shawn'; 'Terry'; 'Tim'  
**Subject:** RE: Sanitary Sewer Repairs - Spring Creek

Update please

Sent via smartphone.

----- Original message -----

From: Rick Pulvirenti <[rpulvirenti@springdalewater.com](mailto:rpulvirenti@springdalewater.com)>  
Date:09/24/2014 4:56 PM (GMT+01:00)  
To: 'Heath Ward' <[hward@springdalewater.com](mailto:hward@springdalewater.com)>, [dsprouse@springdalear.gov](mailto:dsprouse@springdalear.gov), 'Al Hanby' <[chanby@aol.com](mailto:chanby@aol.com)>, Chris Weiser <[chris@jv.com](mailto:chris@jv.com)>, 'Lynn Carver' <[lynndonaldcarver@gmail.com](mailto:lynndonaldcarver@gmail.com)>, "'Paul E. Lawrence'" <[pell1946@yahoo.com](mailto:pell1946@yahoo.com)>, 'Terry McConnell' <[terry.mcconnell@weschecompany.com](mailto:terry.mcconnell@weschecompany.com)>, 'Jennifer' <[jenos@springdalewater.com](mailto:jenos@springdalewater.com)>, 'Kim' <[kpatulak@springdalewater.com](mailto:kpatulak@springdalewater.com)>, 'Shawn' <[sdorman@springdalewater.com](mailto:sdorman@springdalewater.com)>, 'Terry' <[tphillips@springdalewater.com](mailto:tphillips@springdalewater.com)>, 'Tim' <[thawkins@springdalewater.com](mailto:thawkins@springdalewater.com)>  
Cc:  
Subject: Sanitary Sewer Repairs - Spring Creek

To all:

In Heath's absence I offer the following as an update of recent efforts taken to mitigate exfiltration of sewage along certain sections of sanitary sewer adjacent to Spring Creek.

September 17, 2014

After installing dual 18-inch bypass lines, six high capacity pumping units, and associated valving and appurtenances, crews from Maverick Pump began bypass pumping operations to determine reliability and capacity. The planned pumping system proved sufficient to handle normal flow as well as capacity to bypass infiltration from recent storm events.

September 18, 19 & 20, 2014

Once the sewer lines were clear of flow, crews from CleanServe, Inc. performed cleaning and closed circuit camera inspection of the lower three sections of sewer mains. Television inspection revealed several badly deteriorated points within the main that were not visible during previous inspections. Field verification by SWU crews indicated in excess of 100 gallons per minute clear water flowing through the bypassed main sewer line. Also, severe deterioration was noted within several of the manholes along the main line.

September 20, 2014

Upon finalization of cleaning and televising the lower three sections, crew from Insituform Technologies, Inc. began installation of the cast-in-place liner. The 900+ foot section of liner was installed by 8:00 pm., and the external heating process was put into place. Throughout the process manhole repair crews from Corgill Construction performed manhole lining and repair.

September 21, 2014

The first three sections were allowed to cure, and by late afternoon the temperature had lowered enough to allow release of the heated water. The section was deemed complete awaiting post television inspection to determine the success of the installation.

September, 22, 2014

Early Monday morning crews began by repeating the cleaning and television inspection of the remaining two sections, approximately 680 feet, of sewer main in advance of lining. The inspection revealed additional deterioration within the lower portion of the sewer main below the haunch of the pipe. These sections were deemed lineable, and the liner was inverted into the pipe. The process continued until late afternoon Tuesday, September 23.

Throughout the process, Springdale Water Utilities crews performed bypass operations on a lateral connected to the system, assisted the contractors in their efforts, and monitored the work and conditions within the creek. The visible condition of the water within the creek has improved since Wednesday, September 17 when the bypass was put into operation. However, weather conditions that day included intense rainfall in the afternoon contributing to local area flooding. The water level within the creek increased and scoured most of any debris or growth attributed to the waste stream entering the creek.

As of the date of this report, odor and cloudiness have improved to a point where the offensive conditions are minimal. Although the water within the creek appears much better, a slight odor and cloudiness in bright light conditions can sometimes be recognized. Now that the major portion of infiltration has been removed from the pipe interior, crews will focus on rehabilitating the manholes.

While the efforts envisioned were never 100% fail safe, exploration under no-flow conditions revealed several deficiencies that could not be determined otherwise. Severe cracking was noted along the bottom of the existing clay

pipe as well as an open 10-inch conduit to the creek. A large opening or breach in the bottom of the clay pipe was noted near the manhole adjacent to the leak located in the creek.

With all the efforts to date, we are near a point where a determination must be made as far as the breakdown of the bypass pumping system. Finalization of manhole rehabilitation will continue through tomorrow, and a waiting period must be employed to determine the success of the repair. We currently have concern regarding the long term effectiveness of the manhole rehabilitation and the extent or need for additional sewer lining either upstream or downstream. Over the next day or two, we will be monitoring the creek and hopefully repair a cracked sewer main near the bypass operation that conveys industrial flows along Creek Avenue. Upon further determinations, we will appraise on the continuation of these operations.

We welcome any inquiries, questions or comments regarding our efforts. Also, if anyone would like to view the operations, feel free in contacting me at your earliest convenience.

Rick Pulvirenti  
479-601-4012