



# BOARD OF PUBLIC WORKS

CITY OF HANNIBAL

OFFICE 573-221-8050  
FAX 573-221-7522  
[www.hannibalbpw.org](http://www.hannibalbpw.org)

## ELECTRIC, WATER AND SEWER DEPARTMENTS

3 INDUSTRIAL LOOP DRIVE • PO BOX 1589 • HANNIBAL, MISSOURI 63401-1589

June 5th, 2013

### HOW OLD IS TOO OLD?

A year ago the HBPW received a grant from the MoDNR to perform a detailed study of our water distribution system. The purpose of the study was to evaluate the whole system, identify shortcomings, suggest fixes, and provide estimated costs. The results are in. The engineering company we hired, an expert in these things, also prioritized the various shortcomings, giving the HBPW a roadmap, if you will, of improvements we should make over time to ultimately have a first class water system.

You would expect our water system to be a highly engineered, optimized system to deliver safe water in adequate quantities to all customers. In reality, it is not quite that perfect. Instead, imagine what happens when multiple developers over decades add to the system in piecemeal fashion when new subdivisions are put into the City. The interconnecting mains are sometimes just barely able to supply the demands of this patchwork. Only in recent years, with computers, are we able to analyze the flows and pressures of the network as a whole. Our Engineer analyzed Hannibal's water system for the first time this year.

Hannibal has 150 miles of water mains. They are connected and cross connected in a way that reminds you of a spider web so that any one customer could be served through multiple paths of pipelines. This is a good thing. It prevents dead end pipelines and associated stagnant water. But, it is not perfect. We actually do have neighborhoods whose pipelines are not interconnected with others. Others suffer from low water pressure. Some have water pressure that is too high. Some fire hydrants work better than others because of the pressure problems. We need more cross connections.

We have been building our water system for 125 years. The first pipes put in the ground are still in use. How long do you suppose they will last? Pipe manufacturers estimate about 135 years. Should these old pipes be replaced before they fail? Pipe failures ruin street pavement. A catastrophic failure in certain critical locations could leave whole neighborhoods without drinking water or fire protection for days or weeks. Is that ok? I don't think so! Wholesale replacement of older pipe ruins pavement, too, but may not cause the inconvenience of lost water service. Either way it is very expensive.

There are two pipes that deliver water from the river to the treatment plant. The older one was put in service in 1890, and the newer in 1924. Do the math. On hot summer days we need both to meet our demand for water. In the last three years we have experienced about six major leaks on the older of the two. I think that is a sign it is nearing the end of its useful life. What do you think? Should we risk losing half of our water supply by trusting a leaky pipe that is already 125 years old? Or, should we replace it before we get in real trouble? Price tag is \$3 million and a year's time in planning and construction. In August there will be a referendum on the ballot authorizing the Water Utility to borrow \$13 million over six years. About half of that money will be used to fix shortcomings as I just described. The rest will finance unfunded mandates that I will explain in a future column.

Thoughtful comments are always appreciated. For more information and to see copies of previous guest columns please go to our website [www.hannibalbpw.org](http://www.hannibalbpw.org) or follow us on Facebook. Post your comments



# BOARD OF PUBLIC WORKS

CITY OF HANNIBAL

OFFICE 573-221-8050  
FAX 573-221-7522  
[www.hannibalbpw.org](http://www.hannibalbpw.org)

---

## ELECTRIC, WATER AND SEWER DEPARTMENTS

3 INDUSTRIAL LOOP DRIVE • PO BOX 1589 • HANNIBAL, MISSOURI 63401-1589

or send a letter to the editor of this paper. Come to a HBPW Board meeting. Tomorrow, June 6<sup>th</sup> at 4:30 the Board will hear a presentation by the Engineer that studied our water system. He will discuss a broader range of problems that space limits prevent discussing here.

Sincerely,

*Robert W Stevenson*

Robert W. Stevenson, P.E.  
General Manager

*“The mission of the Hannibal Board of Public Works is to provide safe, reliable utility products with excellent customer service at reasonable prices.”*