



Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

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MEMORANDUM

Date: July 16, 2019
To: Water Utility Commission
From: Daniel S. Duchniak
Re: Well #13 Emergency Repair

On June 28th, the shaft broke in Well 13 just above the pump, rendering the pump useless and decreasing our water supply by 550gpm, dropping us to 6.7million gallons a day of radium compliant water.

Well 13 is one of our shallow radium compliant wells on the southwest side of the city. With it in service and Well 10 at half capacity we can reliably produce 7.6million gallons per day of radium compliant water.

This break did occur during the time of the storms in the area, however, there was no evidence of a power fluctuation and the break is believed to be caused by the poor alignment of the well itself.

At that time, our water demand was in the 5.8mgd range, so despite Well 10 at half capacity and Well 13 out of service, we were able to meet demands running the other compliant wells. We began the evaluation of several pump options. As a result of this evaluation we believe that a submersible pump and motor are the best solution for Well 13. This type of pump is the most forgiving when a well is not quite as "vertical" as it should be.

On July 11th, with our demands increasing and trending to more than 6.7mgd, we began using Well 7. Well 7 is normally a non-compliant deep well, but is the closest to compliant water from a radium standpoint. At this point well 7 is deemed to be "compliant" because the last several radium tests have been below the standard. This is due to non-use of the well and we fully expect that continued use of this well would result in it returning to non-compliant status. At this point, adding Well 7 brought our compliant production back to 7.6million gallons per day. However, the demand for July 11th was 7.1mgd. Yesterday's demand was just above 7.2mgd, and the heat is expected to continue over the next week or so.

It is for this reason I used my authority under policy 501.1 which allows me to make emergency purchases \$15,000 or greater.

Fortunately, due to the size and type of pump and motor, it can be produced in Delavan Wisconsin today and installation can start tomorrow. This extremely fast turnaround time, and slightly ahead of the Commission meeting on Thursday, however, this should allow us to have the well tested and in

service on Saturday allowing us to remain radium compliant despite the continued high temperatures and associated increasing water usage. This would bring our radium compliant water production up to 8.5mgd for the rest of the month while we continue to use Well 7.

While the temporary pump is being used, we will evaluate its performance. Assuming it performs as well as expected, we will prepare an official submittal to DNR for an approval of a permanent submersible pump for Well 13.

Recommended Motion: Approve the purchase and installation of a temporary submersible pump and motor at an estimated cost of \$29,350 from Municipal Well & Pump.