

1.0 GENERAL

Every business needs a plan to effectively guide investment decisions. Rural water districts are no different than other businesses in that regard, particularly older Districts with facilities near the end of their service life. Bartlett & West is pleased to have the opportunity to assist Wabaunsee County Rural Water District No. 1 in the development of a system-wide analysis and long-range plan. As part of our services to the District, we have identified the deficiencies that currently exist and are likely to exist in the future. The purpose of this analysis is to establish a plan that will serve as a guide for the Board of Directors. Phased improvements are outlined and correlated to growth projections. The immediate and future financial impacts are also illustrated.

RWD No. 1 began operation in 1969 and covers about 55 square miles in eastern Wabaunsee County, generally between Maple Hill and Eskridge. Approximately 67 miles of PVC pipeline serves almost 200 customers. The majority of the waterline is 4" or smaller, totaling 64 miles, with the remaining 3 miles being 6" pipe. The District purchases water from the City of Eskridge and operates a 15' x 72' standpipe. A buried control vault dictates the water level fluctuation in the standpipe. The District has no pumping facilities. The locations are illustrated on the Figure 1-1 master layout.

As the District continues to grow, the distribution system capacity will be strained. This study serves to predict approximately when storage and pipelines will need to be improved. A hydraulic model was used to analyze the performance of the waterline distribution system under anticipated peak demands, as well as the performance under projected peak demands for 2032 and 2042. Improvements are noted and modeled as appropriate over that span. Cost estimates are provided for each improvement and the financial impact is analyzed, both in the short term and long term.

This planning document should be used by the Board of Directors to address current deficiencies and financially plan for the future. The specific design of each project identified in this report should be re-evaluated prior to construction. A review of the District's growth and of the hydraulics of the system should be conducted at least every five years to determine if revisions to this report are necessary.

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