



To: President and Members of Town Council

From: Staff of Public Works

Meeting: June 17, 2024

Re: Water Distribution Model Proposal

Background: In 2021, a skeleton water model was created for the Town of Munster. A comprehensive hydraulic model of the water distribution system has not been done for the Town of Munster. This project will give the Town a clear, detailed picture of how our water system works today and how it can be improved for tomorrow. It will ensure we are prepared to meet the water needs of our community, both now and in the future. This investment in our water infrastructure is essential for maintaining reliable and efficient water service for the residents.

Methodology: SEH's proposal includes several key aspects that will benefit our community:

Hydraulic Model Development: This involves creating a detailed simulation of our water system, including field and flow testing, to ensure the model accurately reflects real-world conditions. The model will be calibrated and verified to confirm its accuracy.

Operational Simulation: The calibrated model will be used to simulate the current operations of our water system. This will help us identify potential issues during various scenarios such as average day, maximum day, and fire flow events, ensuring our system can handle all demands.

Flow Capacities and System Pressures: The project will examine our system's operational flow capacities and pressures to ensure effective service delivery now and in the future. This will help us understand how our system performs under different conditions and demands.

Water Supply Analysis: SEH will conduct an analysis to determine if our supply and treatment facilities can meet current and future water needs. This includes identifying any potential shortfalls and understanding how long water takes to travel through the system.

Baseline Understanding: The project will provide a thorough understanding of our current system operations and limitations. This baseline knowledge is crucial for identifying and implementing alternative solutions in the future.

Capacity Evaluations: The tasks include evaluating the capacities of our water supply and distribution systems, performing both steady-state and extended-period simulation analyses. This will help determine our water storage needs and identify any limitations in the current system.

Funding: The funding for the Water Distribution Model will be from Water funds and not to exceed \$48,900.

Recommendation: By motion and voice vote, approve the SEH proposal for the Water Distribution Model at a cost not to exceed \$48,900 for the project.