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Optimization of Pumping System for Small Community

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This project is intended to analyze the design of a pumping system capable of satisfying the water distribution requirements for a small community by means of a piping network. Two pumping time interval were considered in order to provide two possible optima solutions that would satisfy the water need of the community. We used algorithms in MatLab to perform a comparative analysis of the design options in order to obtain the most cost effective and efficient design. We finally chose 8-hour system with subsystems made of combinations of pump in series and parallel.