



Graph algorithms and central control of sewer systems

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In the Netherlands there are many small sewer systems that combine foul water and storm water sewer functions in flat terrain. These systems are a combination of local gravity flow networks connected by pumps. Usually the original design assumed local control. Later changes, additions and extensions sometimes reduced the effectiveness of the original design. In these cases central control can improve the performance of the system without costly new construction. One interesting concept that could be used comes from dynamic network flow theory. It is the quickest evacuation flow would be an interesting candidate. We compare its results without foreknowledge of the event to linear programming results with full knowledge of the entire event.