ABSTRACT

TITLE:	Water Flow Restrictor for Use in EWB Water Systems
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ABSTRACT: This project addresses the need for new solutions to correct problems in existing EWB water systems, specifically the need to control flow rates and water pressures at selected points within a water supply system. The proposed solution is to design and implement a variable flow pressure restrictor (VFPR) that can be installed into the existing water systems. Traditional pressure regulators are cost prohibitive for this application, so the main point of the research is to find a simpler, less expensive alternative that still maintains functionality and reliability. The study covers the selection of suitable hardware for the purpose, design of the new VFPR, method of testing, and results of testing the selected type of restrictor. Through testing it was determined that the simple orifice restriction hardware, with interchangeable orifice sizes, would be suitable for the application. A table of orifice sizes with pressure and flow characteristics related to each was created as a guide for student engineers to use while installing this hardware in the field.