

Energy Conservation and Demand Management Plan 2020-2024

Port Burwell Area Secondary Water Supply System (PBASWSS)

Introduction

In 1998, the Province of Ontario granted equal ownership to the three municipalities and created the PBASWSS by a Provincial Transfer Order. The transfer order established a Joint Board of Management comprised of one member from each of the area municipalities. The transfer order gave the Joint Board “full authority and necessary powers to operate and manage the board on behalf of the municipalities”. The transfer order established the Township of Malahide as the Administering Municipality responsible for the daily operation of the system and the administration thereof on behalf of the Joint Board.

The Port Burwell Area Secondary Water Supply System is a water transmission system, 31.3 km in length. The line provides water to approximately 3,000 persons. The System has three re-chlorination facilities, 45 access chambers (meter, air release, drain and isolation), and a water tower within its infrastructure. There are no pumping stations. Each re-chlorination facility has 2 chemical feed pumps: a stand-by and a duty. The duty pump runs continuously and doses sodium hypochlorite at a variable rate. The pump speed is based on the instantaneous measurement of the chlorine analyzer at each site. Re-chlorination is required in order to maintain adequate chlorine residuals in the transmission main to satisfy regulatory requirements. It is important to note these pumps are not large and run off a standard household outlet. The water tower provides pressure to the system by way of gravity. All water pumped into the system is done by the high lift pumps at the Elgin Area Water Treatment Plant (EAWTP). The aforementioned high lift pumps are not a component of the PBASWSS.

Goals & Objections

The total annual electrical consumption is very low for this system. The power usage will be monitored, on an ongoing basis, to maintain these levels going forward.

As pumps require replacement, or the chambers or tower are upgraded, the Board of Management for the System will investigate new technologies and other opportunities that will reduce energy consumption.

Consumption & Targets

Included as Appendix A to this Plan is a statement of energy consumption for the 2018 fiscal year. In 2018, the Port Burwell Area Secondary Water Supply System consumed approximately 32,743 kWh of electricity. The System anticipates similar levels of consumption for the foreseeable future.

While the System is committed to maintaining or even reducing its consumption, it does not at this time anticipate cost savings due to the projected energy cost increases over the next 5 years.