

Corporation of the City of Brantford

Water Management Plan Implementation Report

Holmedale Dam Generating Station

2/16/2019

This report addresses the implementation of the June 29, 2018 amendments to the City of Brantford Water Management Plan (WMP) for the Holmedale Generating Station (February 2005).

Background

The City of Brantford Water System's Micro Hydro Generation Station was built in 1985. It is located downstream of the water treatment plant where the canal water drains back into the Grand River. The water treatment plant and the micro hydro station are owned and operated by the City of Brantford. The City has a permit to take water from the Ministry of Environment, Conservation and Parks (MECP) for both the water treatment plant and the micro hydro station. The rated capacity of the station is 130 KW. Water is supplied to the station via the Holmedale Canal from the Grand River via Wilkes Dam.

Wilkes Dam is an overflow weir that has no flood control or flow augmentation function. The primary operating objective of Wilkes Dam is to create a head pond and divert water for the City of Brantford municipal water supply. The dam creates head pond that is approximately 1.5 meters deep. A water supply canal is used to divert water needed for the City of Brantford municipal water supply.

Amendment Requests

Since the City's WMP for the Holmedale Generating Station was completed in February 2005 there have been no amendment requests.

Standing Advisory Committee (SAC)

The City's WMP for the Holmedale Generating Station did not require a Standing Advisory Committee (SAC).

Effectiveness Monitoring

The City's WMP for the Holmedale Generating Station does not outline specific monitoring requirements. There have been no physical changes to the Station or the Holmedale Canal since the WMP was implemented in 2005.

As noted in the WMP:

"The Homedale hydropower facility will continue to generate about 130 KW on a 24 hour seven day a week basis. This station is connected directly to the water treatment plant grid instead of the City grid and all power generated is used by the water treatment plant. This station generates approximately 4% of the electricity demand of the water treatment plant each year. Being that the water flow in the canal is regulated based on the raw water quality and the amount of water treated for drinking water supply purposes and not for hydro production, the facility cannot affect headpond elevations or flows passing over the dam.

Since the Homedale Dam Generating Station cannot significantly affect water levels and flows an operating range has not been identified for this facility, and thus there are no requirements for reporting flows and levels by the facility operator.”

Note

The Holmedale Generating Station is now only operated to ensure the water in the Holmedale canal does not present the Water Treatment Plant with any water quality issues. This is done from May to September on a need only basis for short periods of time. The generating station is no longer used for any other purpose (hydro generation) due to high maintenance and operational costs outweighing the benefit of supplementing the old water treatment plants electrical demand. Further to that, the old water treatment plant has been decommissioned and is no longer occupied or in use.

Data and Information Collection Program

The City's WMP for the Holmedale Generating Station does not outline specific data and information collection program requirements.

The quality and quantity of the water in the Holmedale Canal is monitored 24/7 via the City's SCADA system since the supply for the Station is the raw water supply for the City's WTP.