

Technical Summary of the Environmental Facilities under
Cape Dorset Water Licenses # 3BM-CAP 0810

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Cape Dorset is the Capital of Inuit Art. This community is located at 64°14'N Latitude and 76°32'W Longitude on Dorset Island near Foxe Peninsula at the southern tip of Baffin Island in the Qikiqtaaluk Region of Nunavut. The current population in 2011 is 1536. The average growth rate is less than 2.5%. The water permit under the Current Water License # 3BM-CAP 0810 is maximum 70,000 cubic meters annually. Under the License, there are three Environmental facilities: (1) Water Supply System; (2) Solid Waste Management and (3) Wastewater treatment by Sewage Lagoon.

Water Supply System: Tee Lake is the potable water source in the community. This lake is located about 1.00Km away from the Water Treatment Plant. The water is extracted from this Lake using a submersible pump and supplied to the treatment plant through a heat traced intake pipe line. This pipe line is supported by several posts to maintain the pipe gradient. This is an upgraded water treatment process better than the standard Water Truck fill station. The minor repairing works were carried out during last winter.

Solid Waste Management: The Community has been managing two waste sites: One for metal waste management and another one for domestic wastes management. A feasibility study on metal waste management was done by Concentric, an environmental Consultant. Two monitoring wells were constructed at the waste site to satisfy the requirements of the Water License. The wastes management project is currently on hold until further direction of the GN-CGS Capital Planning.

Wastewater Treatment by Sewage Lagoon: The community is right now using three cells lagoon which are poor state and under capacity. A new Lagoon was built in 2007 at P Lake and licensed in 2008 with pre conditions like installation of three monitoring wells and four thermistors. The temperature data for 2008 and 2009 were collected from the field and validated by AMEC, a geotechnical consultant. The construction of three monitoring wells was completed in June 2011 and ground water will be sampled and tested at the end of August. All the requirements to commission this new Lagoon were fully satisfied as per the Hamlet water License # 3BM-CAP 0810. Cape Dorset is willing to commission this new facility in August and soon after starting developing a monitoring program using a QA/QC plan certified by the accredited lab. The first cell of the three existing Lagoons will be kept active for emergency. Once the new lagoon starts functioning satisfactorily, the first cell will be used for sludge management. The remaining two cells will be scheduled to be decommissioned some time in 2012/13.