

6.0 Recommendations

Based on the results of this assessment, the following recommendations are made:

1. The existing full scale test well should be converted to a permanent production well equipped with a pump of suitable performance rating and the necessary controls. The requirement for a secondary back-up well is dependant on the implications of a temporary disruption of supply should the primary well fail. Given that the water system currently draws water from other sources that likely will have some capacity to temporarily supply water even in a drought, there may not be a need for a secondary back-up well. As a minimum, replacements for the pump and critical components should be maintained in stock to ensure that the well can be put back in service as quickly as possible.
2. The existing monitoring wells TH-5A, TH-11, TH-12 and TH-19 should be converted to permanent monitoring stations to allow long term monitoring of the response of the aquifer to pumping. Groundwater levels should be monitored at least monthly when the system is in operation and the information maintained in a database for future review. The other monitoring wells installed as part of this project should either be properly abandoned or equipped with locked steel well head covers to protect them from damage. The preferred option is to maintain the monitoring wells for future use to support studies of the expansion of this system, or other studies in the area. The exception to this is monitoring wells TH-16, 17 and 18 located on the lowlands to the west of the pumping well. Wells TH-17 and 18 have above grade static water levels and there is a risk that the wells will freeze and the casing will be damaged. It is recommended that these wells be either properly abandoned or ownership turned over to the Groundwater Management Section of Manitoba Conservation for maintenance and use as part of their permanent monitoring well network. Discussions with Groundwater Management Section staff indicate that they are willing to take over ownership of these monitoring wells.
3. After the permanent pumping equipment has been installed in the pumping well and before it is put into operation, the well should be disinfected. Once in operation, the discharge should be sampled and analyzed in accordance with the requirements of the license for the water treatment plant, and disinfection and other actions taken as warranted based on the results.
4. Decisions concerning the potential location of additional pumping wells to support any future expansions that may be required should be deferred until the information from the long term monitoring of the aquifer response to this initial pumping is available. Potential locations for future pumping wells that have been identified to date include the test well TH-7, TH-4 and TH-8 locations. Other potentially suitable locations may be identified as a result of the long term monitoring information or future investigations