

Water Use Licensing Report: Whitemud River Watershed

Protective Process:

Water Rights Use Licensing is done under the authority of the Manitoba *Water Rights Act* which came into force in 1930 when Manitoba took control of its natural resources which had previously been administered by the Federal government. The water use licensing process is the principle mechanism available for ensuring the sustainable development of the province's water resources for beneficial purposes. The Act provides for hydrologically based legal framework that balances human and environmental needs. The licensing process takes into consideration the appropriate social, economic, political and administrative aspects of water management. At the core of the licensing process is the requirement for water to be legally appropriated and put to beneficial use by the licensee.

The intent of water rights licensing is to protect the interests of licensees, domestic users, the general public and the environment with respect to the use or diversion of water or the construction and operation of water control works under licence. In Manitoba, water withdrawals of less than 5500 l/day (25,000 L) generally do not require licensing. These projects are protected under the domestic exemption. Licenses are issued for municipal, agricultural, industrial, irrigation and "other" purposes. Projects that fall into the "other" category include air cooling/heating; aquaculture; fire protection; water bottling; water slides; etc.

The general and specific conditions that are included on all licenses reflect, in part, the information received from the technical and management studies that have been carried out for the project and/or water body. For surface water projects, this determination is based on an analysis of stream flow data, riparian needs, the water use requirements of senior water users, domestic needs, and instream flow requirements. For groundwater projects, this determination is based on an assessment of hydrogeological information including; geological information on aquifers, aquifer sustainable yield estimates and water allocation budgets, where available, as well as the water use requirements of senior users and domestic needs. [Note – Projects withdrawing more than 200 cubic decameters of water in a year are also subject to Environment Act licensing which has a formal public notification and engagement process.]

Water Rights Projects in the Whitemud Watershed:

There are presently some 272 water rights projects within the Whitemud River watershed. Residents in this watershed are more reliant on groundwater sources than surface water. Eighty percent (215) of all projects on file with the Water Use Licensing Section within this watershed are groundwater sourced and 89% (242) of all projects are using water for the purpose of irrigation. Sixteen projects are for municipal distribution systems and twelve are for the purpose of watering livestock. Two groundwater sourced applications are requesting water for industrial use.

In this watershed 18,275 dam³ has already been allocated under licence for both groundwater and surface water sourced projects. Irrigators are the highest water users from a volumetric perspective followed in turn by municipal users and livestock producers (Figure 1).

Purpose	Allocated Under Licence (dam ³)		Total Allocation (dam ³)
	Groundwater	Surface Water	
Agricultural	67	63	130
Industrial	0	0	0
Irrigation	14,702	1985	16,687
Municipal	239	1219	1458
Other	0	0	0
Total	15,008	3267	18,275

Figure 1: Amounts Allocated Under Licence

Figure 2 illustrates the locations of the Water Use Licensing projects within the Whitemud River watershed.

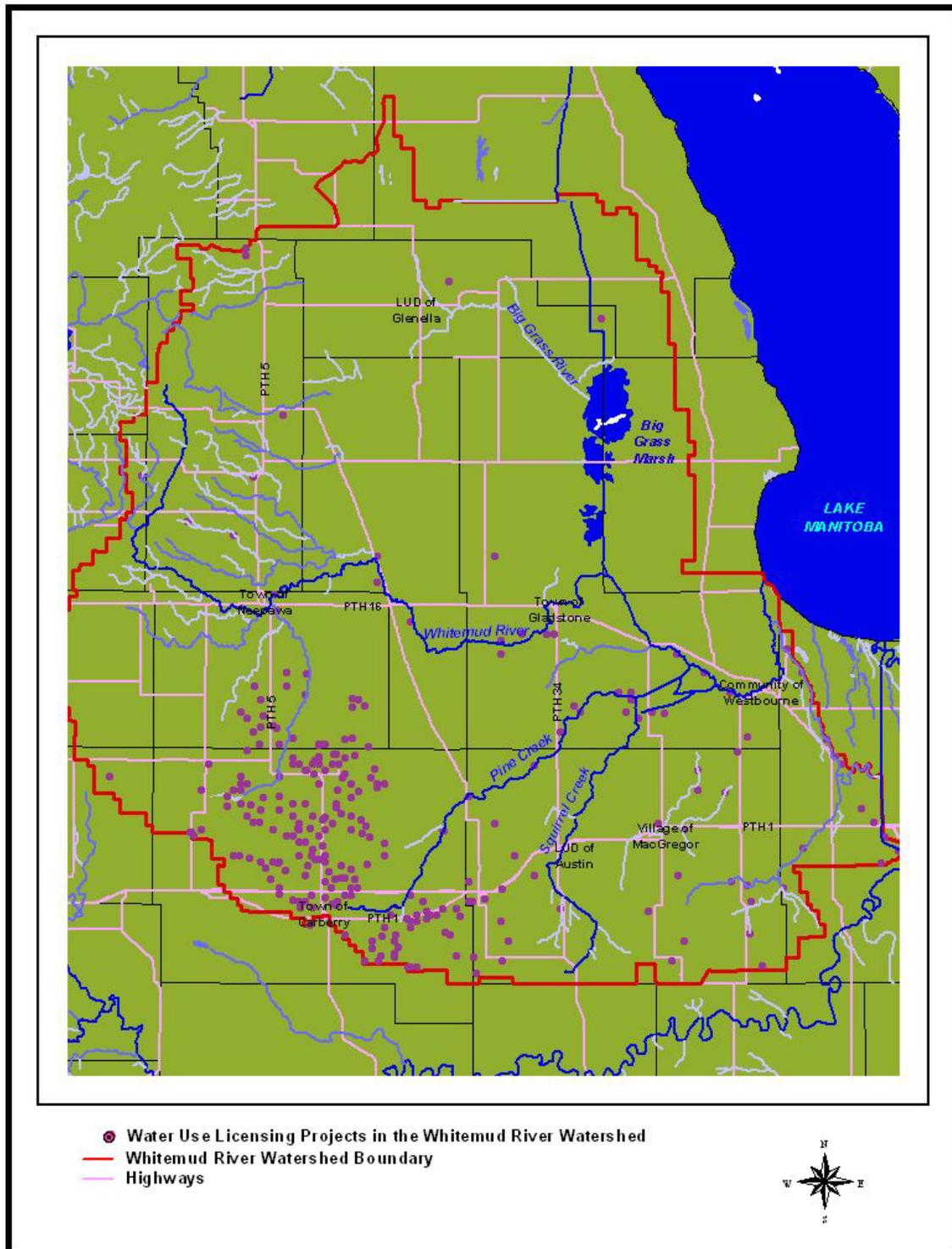


Figure 2: Location of Water Use Licensing Projects in the Whitemud River Watershed

Data Gaps:

Estimates of sustainable yields have been calculated for the sub-basins of both the Assiniboine Delta and Oak Lake aquifers. The interested reader is directed to the Assiniboine Delta and Oak Lake Aquifer Management Plans for a detailed discussion of this topic. In addition, water budgets have been established on the Whitemud River. Otherwise, aquifer or whole stream budgets have not yet been established in the Whitemud River watershed where budgets have not been established licensing decisions are based on an individual site specific evaluation. Current allocations are believed to be well below the sustainable yield of the major streams and aquifers.

Water Budget Models are developed by the Groundwater and Surface Water Management Sections to set allocation limits for major streams and aquifers. These models divide aquifers and waterways into individual sub-basins and reaches. Each sub-basin or reach is assigned a specific amount of water that is available for allocation. By inputting an allocation amount the model computes the amount of water available for allocation at all other points in the sub-basin or along the reach and adjacent reaches affected by the allocation.