

Water Use Licensing Fisher River IWMP Technical Submission:

Water Use Licensing Report: Fisher 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 Fisher River Watershed:

There are a total of six registered water use projects in the Fisher River Watershed and presently only two of these are Approved Licensed projects (Approved Licence Issued). There are also three projects with existing (expired) licences that are waiting to be renewed (Waiting for Assessment of Application) Residents in this watershed are only reliant on groundwater sources rather than surface water. One hundred percent of all projects on file with the Water Use Licensing Section within this watershed are groundwater sourced. There are exactly three Municipal projects on file and three Agricultural projects on file for livestock purposes.

In this watershed, currently 81 dam³ is allocated under licence for the groundwater projects mentioned above. This water is only for Municipal use for The Rural Municipality of Fisher and Peguis First Nation. (Figure 1).

Purpose	Allocated Under Licence (dam ³)		Total Allocation (dam ³)
	Groundwater	Surface Water	
Agricultural	0	0	0
Industrial	0	0	0
Irrigation	0	0	0
Municipal	81	0	81
Other	0	0	0
Total	81	0	81

Figure 1: Amounts Allocated Under Approved Licence

Of the three projects with existing (expired) licences that are waiting to be renewed (Waiting for Assessment of Application), two are for Agricultural use and one is Municipal. Additionally, one agricultural – livestock project remains that has not received any licence to date. (Figure 2)

Purpose	Estimated Allocation for future Licence (dam ³)		Total Allocation (dam ³)
	Groundwater	Surface Water	
Agricultural	59	0	59
Industrial	0	0	0
Irrigation	0	0	0
Municipal	41	0	41
Other	0	0	0
Total	100	0	100

Figure 2: Estimated Amounts waiting to be allocated under future Approved Licence

Figure 3 below illustrates the locations of the Water Use Licensing projects within the Fisher River watershed.

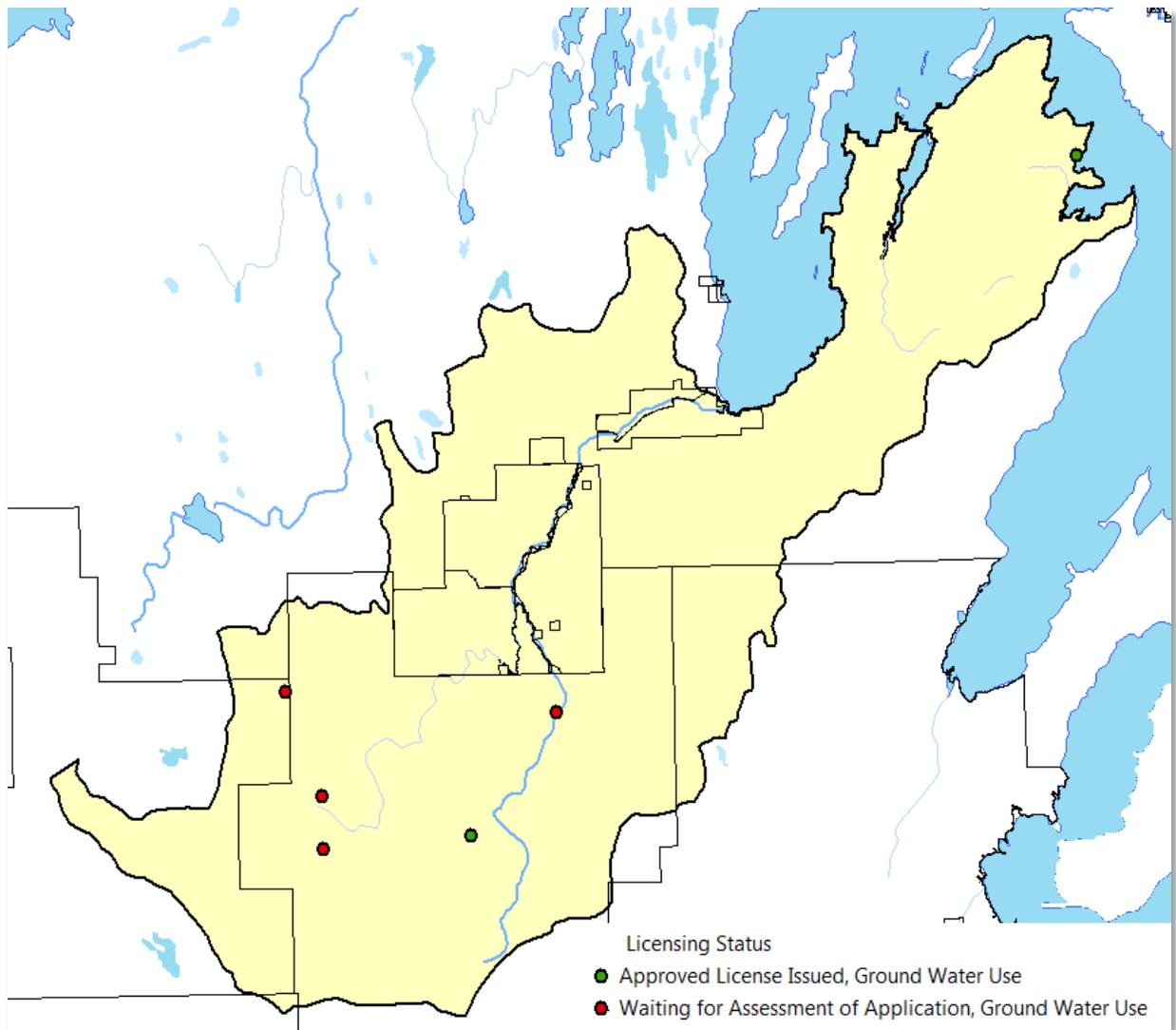


Figure 3: Location of Water Use Licensing Projects in the Fisher River Watershed

Data Gaps:

Aquifer or whole stream budgets have not yet been established in the Westlake watershed; therefore, 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. Such models have not been done for this watershed.

The Water Use Licensing Section evaluates the sustainability of a proposed ground water sourced project by requiring new applicants to hire a professional hydrogeologist to evaluate well and aquifer conditions at the project site.

Basin Yield and Licensed Water Use:

It is often useful to compare the licensed allocation volumes under the Water Rights licensing process with the average annual precipitation volumes for a watershed. To do this we used an average annual

precipitation (rainfall and snow) of 511 mm (20 inches) as determined from the 1971-2000 period of record at the Fisher Branch South weather station. When we convert this figure to a volume it works out to 1,818,905 dam³ annual average over the Fisher River Watershed (approximately 3,150 square kilometers). At this time, the licensed annual allocation volume of all the groundwater projects including the estimated allocation of projects waiting to be licensed in the Watershed is 181 dam³. When we express the licensed allocations as a percentage of average annual precipitation on the basin it works out to less than 0.0001%. Typically the largest component of water "use" in a watershed is the evapotranspiration component. Therefore, future growth in licensed water use in the watershed is likely to come, at least in part, at the expense of the component of the annual water budget that evaporates from the land and water bodies and the component that transpires from the vegetative cover on the landscape.

Water Use Licensing

Manitoba Conservation & Water Stewardship