



**Conservation**

Environmental Stewardship Division  
Environmental Assessment and Licensing Branch  
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FAXED  
CLIENT FILE NO.: 5393.00

July 27, 2009

Martin Harder, Mayor  
City of Winkler  
185 Main Street  
Winkler MB R6W 1B4

Dear Mr. Harder:

Enclosed is **Environment Act Licence No. 2894** dated July 27, 2009 issued in accordance with The Environment Act to the **City of Winkler** for the operation of the Development being a groundwater supply system for municipal purposes for the City of Winkler, with the following components:

- (a) ten shallow wells developed in the freshwater component of the Winkler Aquifer (wells 1 -10);
- (b) up to ten deeper wells developed below the freshwater component of the Winkler aquifer and adjacent to wells 1 – 10 (Deep Wells 1 – 10);
- (c) a water treatment plant in SW 9-3-4W using manganese greensand and reverse osmosis treatment;
- (d) raw water pipelines connecting all wells to the water treatment plant; and
- (e) a reject water pipeline connecting the water treatment plant with the City's wastewater treatment lagoon system in SE 22-3-4W

in accordance with the Environment Act Proposal dated March 4, 2009.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with.

For further information on the administration and application of the Licence, please feel free to contact Bruce Webb, Environmental Engineer at (204) 945-7021.

Pursuant to Section 27 of The Environment Act, this licencing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation within 30 days of the date of the Licence.

Yours truly,

Tracey Braun, M. Sc.  
Director  
Environment Act

Enc.

c: Don Labossiere, Director, Environmental Operations  
Dick Menon, Manitoba Water Services Board  
Steve Wiecek, W.L. Gibbons & Associates  
Public Registries

**NOTE:** Confirmation of Receipt of this Licence No. 2894 (*by the Licensee only*) is required by the Director of Environmental Assessment and Licensing. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by Aug 10, 2009.

\_\_\_\_\_  
On behalf of the City of Winkler

\_\_\_\_\_  
Date

**LICENCE**

Licence No. / Licence n° 2894

Issue Date / Date de délivrance July 27, 2009

In accordance with The Environment Act (C.C.S.M. c. E125) /  
Conformément à la Loi sur l'environnement (C.P.L.M. c. E125)

Pursuant to Section 10(1) / Conformément au Paragraphe 10(1)

**THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉE À:**

**THE CITY OF WINKLER "the Licencee"**

for the construction and operation of the Development being a groundwater supply system for municipal purposes for the City of Winkler, with the following components:

- (a) ten shallow wells developed in the freshwater component of the Winkler Aquifer (wells 1 -10);
- (b) up to ten deeper wells developed below the freshwater component of the Winkler aquifer and adjacent to wells 1 – 10 (Deep Wells 1 – 10);
- (c) a water treatment plant in SW 9-3-4W using manganese greensand and reverse osmosis treatment;
- (d) raw water pipelines connecting all wells to the water treatment plant; and
- (e) a reject water pipeline connecting the water treatment plant with the City's wastewater treatment lagoon system in SE 22-3-4W

in accordance with the Environment Act Proposal dated March 4, 2009, and subject to the following specifications, limits, terms and conditions:

**DEFINITIONS**

In this Licence,

"**accredited laboratory**" means an analytical facility accredited by the Standard Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

"**approved**" means approved by the Director or the Environment Officer in writing;

**\*\*A COPY OF THIS LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES\*\***

**"as constructed drawings"** means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built; and

**"Director"** means an employee so designated pursuant to The Environment Act.

### **GENERAL TERMS AND CONDITIONS**

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. The Licencee shall, in addition to any of the following specifications, limits, terms and conditions specified in this Licence, upon the request of the Director:
  - (a) sample, monitor, analyse or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such duration and at such frequencies as may be specified;
  - (b) determine the environmental impact associated with the release of any pollutants from the Development;
  - (c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
  - (d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, flow rate measurements and such other information as may from time to time be requested.
2. The Licencee shall operate the water supply system in accordance with Manitoba Regulations under the Public Health Act, the Drinking Water Safety Act, and all operating requirements as recommended by Manitoba Conservation and Manitoba Water Stewardship.
3. The Licencee shall collect and dispose of all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and operation of the Development in accordance with applicable Manitoba Conservation and legislation requirements.
4. The Licencee shall maintain the water supply wells associated with the Development to prevent the contamination of groundwater by surface water:
  - (a) entering the well casings through the top of the casings; and
  - (b) entering the well casings through the sides of the casings.
5. The Licencee shall:
  - (a) prepare as constructed drawings for the Development and shall label the drawings "As Constructed"; and
  - (b) provide to the Director, within three months of the completion of construction of the Development, two sets of as constructed drawings.

**SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS**

**Respecting Construction:**

6. The Licencee shall notify the Environment Officer not less than two weeks prior to beginning construction of the Development. The notification shall include the intended starting date of construction and the name of the contractor(s) responsible for the construction.
7. The Licencee shall, during construction of the Development, dispose of non-reusable construction debris at a waste disposal ground operating under the authority of a Licence issued pursuant to The Environment Act.
8. The Licencee shall locate fuel storage and equipment servicing areas established for the construction and operation of the Development in compliance with the requirements of *Manitoba Regulation 188/2001* respecting *Storage and Handling of Petroleum Products and Allied Products*, or any future amendment thereof.
9. The Licencee shall, at all times during the construction of the Development, maintain materials to contain and recover spills of fuel and other fluids associated with construction machinery at construction sites.
10. The Licencee shall, during construction and operation of the Development:
  - (a) immediately report any reportable spills to Manitoba Conservation's Accident Reporting Line at (204) 944-4888; and
  - (b) provide a follow-up report to the Director on a reportable environmental accident outlining the cause(s) and proposing corrective action to prevent reoccurrence.
11. The Licencee shall revegetate soil exposed during the construction of the Development with native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction. Revegetation is not required for pipelines installed by chain trenching or ploughing on previously disturbed ground including road allowances.
12. The Licencee shall construct the first three deep wells of the Development in areas where the brackish water zone is expected to be the thickest. Additional wells shall not be constructed until the project assessment report required by Clause 21 of this Licence has been approved by the Director.

**Respecting Operation:**

13. The Licencee shall properly train or qualify individuals to carry out the operation of the Development pursuant to the requirements of *Manitoba Regulation 77/2003* respecting *Water and Wastewater Facility Operators*, or any future amendment thereof.
14. The Licencee shall not release chlorinated water from pipeline testing and startup activities associated with the Development to a surface water body until chlorine level concentrations are equal to or less than 0.1 milligrams per litre. Releases of chlorinated water at higher

concentrations may be made to vegetated land or dry waterways, provided that chlorine level concentrations have decayed to 0.1 milligrams per litre or less before the released water reaches any body of surface water.

15. The Licencee shall not permit the interconnection of a private water supply system with the Development.
16. The Licencee shall operate the Development with respect to the volume and rate of water diverted in accordance with a Water Rights Licence issued pursuant to the Water Rights Act.
17. The Licencee shall actively participate in any watershed and/or aquifer based management study being undertaken by Manitoba Water Stewardship or any watershed planning authority.
18. The Licencee shall not undertake any measures to increase the recharge capacity of the Winkler Aquifer by diverting or otherwise allowing the introduction of surface water into the aquifer that would not naturally enter the aquifer.

**Respecting Monitoring and Reporting:**

19. The Licencee shall, prior to commencing construction of the Development, file a monitoring plan for the approval of the Director. The plan shall include, but not necessarily be limited to, items listed in Appendix A, attached to this Licence.
20. The Licencee shall, commencing one year from the start of operation of the water treatment plant of the Development, file an annual monitoring report with the Director. The format and content of the report shall be as approved by the Director pursuant to Clause 19 of this Licence.
21. The Licencee shall, three years after the start of operation of the water treatment plant of the Development, file a project assessment report for the approval of the Director. The format and content of the report shall be as provided in Appendix B, attached to this Licence.
22. The Licencee shall file further assessment reports on a schedule and containing content as determined by the Director following the review of the report required by Clause 21 of this Licence.
23. The Licencee shall, unless otherwise specified in this Licence:
  - a) carry out all preservations and analyses on liquid samples in accordance with the methods prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater, or in accordance with equivalent preservation and analytical methodologies approved by the Director; and
  - b) ensure that all analytical determinations are undertaken by an accredited laboratory.

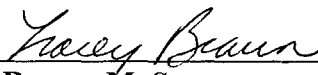
**Respecting Reject Water Disposal:**

24. The Licencee shall, in conjunction with the assessment report required by Clause 21 of this Licence, file a long term plan for the disposal of reject water from the water treatment plant of the Development. This plan shall be filed with the Director within three years of the start of

operation of the water treatment plant of the Development, and shall address expected reject water quantity and quality for the remaining life of the water treatment plant. The plan may be filed as a request for a major alteration to the Development authorized by this Licence, or as a request for a major alteration to the Development authorized by Environment Act Licence No. 2525, issued for the Licencee's wastewater treatment facilities.

### **REVIEW AND REVOCATION**

- A. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- B. If construction of the development has not commenced within three years of the date of this Licence, the Licence is revoked.
- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 11 of The Environment Act.

  
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**Tracey Braun, M. Sc.**  
**Director**  
**Environment Act**

Appendix A

**Annual Monitoring Plan – City of Winkler Water Supply System**

A report on monitoring shall be filed annually beginning one year after the start of operation of the water treatment plant of the Development. The report will include items proposed in the approved annual monitoring plan.

The annual monitoring plan shall include but not be limited to the following:

1. Monitoring objectives and how the proposed monitoring scheme will meet these objectives.
2. Source monitoring:
  - (a) quality of water in each production well of the Development;
  - (b) water quality parameters to be monitored and frequency of monitoring;
  - (c) pumping times, rates and total volumes from each production well;
  - (d) adjacent monitoring wells – ownership, levels and quality of water, water quality parameters and frequency of monitoring; and
  - (e) need for additional monitoring or proposed changes to the monitoring based on results.

Note: With respect to ownership of monitoring wells (item d), where provincial monitoring wells are to be used, verification of the continuing availability of the monitoring wells should be demonstrated.
3. Water treatment plant influent:
  - (a) volume of mixed raw water; and
  - (b) quality of mixed raw water (including parameters to be monitored and monitoring frequency).
4. Water treatment plant treated water:
  - (a) volume of treated water; and
  - (b) quality of treated water (including parameters to be monitored and monitoring frequency).
5. Water treatment plant wastewater and reject water:
  - (a) volume of wastewater from manganese greensand treatment process;
  - (b) quality of manganese greensand process wastewater (including parameters to be monitored and monitoring frequency);
  - (c) volume of reject water from reverse osmosis treatment process;
  - (d) quality of reject water (including parameters to be monitored and monitoring frequency);
  - (e) volume of mixed wastewater and reject water; and
  - (f) quality of mixed wastewater and reject water (including parameters to be monitored and monitoring frequency).
6. Wastewater treatment lagoon effluent:
  - (a) dates of wastewater effluent discharge;
  - (b) volume of wastewater effluent discharged; and

- (c) quality of wastewater effluent discharged (including parameters to be monitored and monitoring frequency).
7. Analysis of monitoring results: an interpretation and assessment of the results of sections 2 – 6 of the report, identifying key trends.
  8. Conclusions, including a discussion of how objectives are met.



Appendix B

**Project Assessment Report – City of Winkler Water Supply System**

Filed three years after the start of operation of the water treatment plant of the Development

The project assessment report shall include but not be limited to the following:

1. Objectives.
2. Development and application of digital groundwater model in cooperation with Manitoba Water Stewardship.
3. Aquifer performance:
  - (a) level and water quality effects since the commencement of pumping from the deep wells; and
  - (b) anticipated future performance.
4. Raw water assessment:
  - (a) annual volumes pumped;
  - (b) comparison to projected volumes;
  - (c) water quality trends; and
  - (d) comparison to expected water quality.
5. Treated water assessment:
  - (a) annual volumes; and
  - (b) quality comparisons to treated water objectives.
6. Water treatment plant wastewater and reject water:
  - (a) annual volumes; and
  - (b) comparisons to expected quality.
7. Wastewater treatment lagoon:
  - (a) annual volume of effluent;
  - (b) proportion originating from water treatment plant wastewater and reject water; and
  - (c) quality effects.
8. A discussion of optimization of processes for fresh and brackish water withdrawal.
9. Options for continued development of deep wells and for supply well operation, including schedule and location of additional deep wells; recommended option.
10. A discussion of the potential for current or expected water withdrawal impacts to affect existing or potential future users of the aquifer with respect to quantity or quality.
11. Recommendations:
  - (a) water treatment plant operational changes;

- (b) wastewater disposal; and
- (c) future system monitoring.