Manitoba
Conservation and Water Stewardship

Climate Change and Environmental Protection Division
Environmental Approvals Branch
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CLIENT FILE NO.: 3205.00

September 4, 2013

Diane Sacher, P.Eng.,
Director, Water and Waste Department
City of Winnipeg,
112 — 1199 Pacific Avenue
Winnipeg MB R3E 3S8

Dear Ms. Sacher:

Enclosed is **Environment Act Licence No. 3042** dated September 4, 2013 issued to the **City of Winnipeg** for the operation of the Development being the existing combined sewers and overflow structures located within the City of Winnipeg with discharge of wastewater into the Assiniboine River and Red River.

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. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact the undersigned at 204-945-7071.

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

Yours truly,

"original signed by"

Tracey Braun, M.Sc.
Director
Environment Act

c: Don Labossiere, Director, Environmental Compliance and Enforcement
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 3042 *(by the Licencee only)* is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by September 18, 2013.

On behalf of the City of Winnipeg **Date**

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

THE ENVIRONMENT ACT
LOI SUR L'ENVIRONNEMENT

LICENCE

Manitoba

Licence No. / Licence n° 3042

Issue Date / Date de délivrance September 4, 2013

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 11 / Conformément au Paragraphe 11

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

CITY OF WINNIPEG;
"the Licencee"

for the operation of the Development being the combined sewers and overflow structures located within the City of Winnipeg with discharge of wastewater into the Assiniboine River and Red River and associated tributaries, 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 in writing;

"average dry weather flow" means the average daily volume of wastewater entering the combined sewer system in dry weather;

"combined sewer system" means a wastewater collection system which conveys wastewaters (domestic, commercial and industrial wastewaters) and stormwater runoff through a single-pipe system to a sewage treatment plant or treatment works;

"combined sewer overflow (CSO)" means a discharge to the environment from a combined sewer system;

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

"effluent" means treated wastewater flowing or pumped out of the combined sewer system;

"enhanced primary treatment" means wastewater treatment that utilizes a chemical coagulant/flocculant to remove suspended matter and soluble organic matter;

"Environment Officer" means an employee so appointed pursuant to *The Environment Act*;

"Escherichia coli (E. coli) " means the species of bacteria in the fecal coliform group found in large numbers in the gastrointestinal tract and feces of warm-blooded animals and man, whose presence is considered indicative of fresh fecal contamination, and is used as an indicator organism for the presence of less easily detected pathogenic bacteria;

"fecal coliform" means aerobic and facultative, Gram-negative, nonspore-forming, rod-shaped bacteria capable of growth at 44.5° C, and associated with fecal matter of warm-blooded animals;

"five-day biochemical oxygen demand (BOD_5)" means that part of the oxygen demand usually associated with biochemical oxidation of organic matter within five days at a temperature of 20° C;

"floatable material" means items such as, but not limited to, plastics and other floating debris (e.g., oil, grease, toilet paper, and sanitary items);

"grab sample" means a quantity of wastewater taken at a given place and time;

"MPN Index" means the most probable number of coliform organisms in a given volume of wastewater which, in accordance with statistical theory, would yield the observed test result with the greatest frequency;

"overflow event" means an event that occurs when there is one or more CSOs from a combined sewer system, resulting from a precipitation event. An intervening time of 24 hours or greater separating a CSO from the last prior CSO at the same location is considered to separate one overflow event from another;

"overflow point" means a point of a wastewater collection system via which wastewater may be deposited in water or a place and beyond which its owner or operator no longer exercises control over the quality of wastewater;

"percent capture" means the volume of wet weather flow treated in comparison to the volume of wet weather flow collected on a percentage basis;

"real time" means the actual time at which an event occurs;

"sewershed" means the area drained by a particular network of sewers;

"Standard Methods for the Examination of Water and Wastewater" means the most recent edition of Standard Methods for the Examination of Water and Wastewater, published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Association;

"wastewater" means the spent or used water from domestic, industrial and commercial sources that contains dissolved and suspended matter;

"wastewater collection system" means the sewer and pumping system used for the collection and conveyance of domestic, commercial and industrial wastewater;

"wet weather flow" means the combined flow resulting from:

i) wastewater;
ii) infiltration and inflows from foundation drains or other drains resulting from rainfall or snowmelt; and
iii) stormwater runoff generated by either rainfall or snowmelt that enters the combined sewer system; and

"wet weather period" means the spring thaw period and any period of precipitation capable of generating inflow to a combined sewer system that exceeds the capability of the system to convey wet weather flows to a sewage treatment plant.

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.

Compliance with Licence

1. The Licencee shall direct all wastewater generated within the City of Winnipeg to sewage treatment plants operating under the authority of an Environment Act Licence or discharge wastewater to receiving waters in accordance with this Licence.

Future Sampling

2. In addition to any of the limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:

a) sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
b) determine the environmental impact associated with the release of any pollutant(s) from the Development; or
c) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.

Sampling Methods

3. 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 "Standard Methods for the Examination of Water and Wastewater" or in accordance with an equivalent analytical methodology approved by the Director;
b) have all analytical determinations undertaken by an accredited laboratory; and
c) report the results to the Director, in writing or in a format acceptable to the Director, within 60 days of the samples being taken, or within another timeframe acceptable to the Director.

Equipment Breakdown

4. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.

5. The Licencee shall, following the reporting of an event pursuant to Clause 4,
a) identify the repairs required to the mechanical equipment;
b) undertake all repairs to minimize unauthorized discharges of a pollutant;
c) complete the repairs in accordance with any written instructions of the Director; and
d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.

Reporting Format

6. The Licencee shall submit all information required to be provided to the Director under this Licence, in writing, in such form (including number of copies), and of such content

as may be required by the Director, and each submission shall be clearly labeled with the Licence Number and Client File Number associated with this Licence.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Avoid CSOs

7. The Licencee shall operate the combined sewer system and wastewater collection system such that there are no combined sewer overflows except during wet weather periods.

New or Upgraded Developments

8. The Licencee shall not increase the frequency or volume of combined sewer overflows in any sewershed due to new and upgraded land development activities and shall use green technology and innovative practices in the design and operation of all new and upgraded storm and wastewater infrastructures.

Public Education Plan

9. The Licencee shall, on or before December 31, 2013, submit to the Director, a public education program plan documenting how information on combined sewer overflows will be made available to the public.

Public Notification System

10. The Licencee shall, on or before December 31, 2015, submit to the Director for approval, a plan regarding the development and implementation of an internet-based public notification system for all discharges from combined sewer overflow points, including an assessment of making this notification available on a real time basis.

CSO Master Plan

11. The Licencee shall, on or before December 31, 2015, submit a preliminary proposal for approval by the Director, pursuant to Section 14(3) of *The Environment Act,* for the combined sewer overflow system.

    The plan proposed above would consist of an evaluation of a minimum of the following CSO control alternatives:

    - A maximum of four overflow events per year;
    - zero combined sewer overflows; and
    - a minimum of 85 percent capture of wet weather flow from the combined sewer system and the reduction of combined sewer overflows to a maximum of four overflow events per year.

The Licencee shall, on or before December 31, 2017, file a final Master Plan, including the detailed engineering plans, proposed monitoring plan, and implementation schedule for the approved design identified in the preliminary plan above. The Master Plan is to be filed for approval by the Director. The Licencee shall implement the plan by December 31, 2030, unless otherwise approved by the Director.

Effluent Quality Limits

12. The Licencee shall demonstrate, in the Master Plan submitted pursuant to Clause 11, the prevention of floatable materials, and that the quality of the CSO effluent will be equivalent to that specified for primary treatment to 85% or more of the wastewater collected in the CSO system during wet weather periods. The following effluent quality limits summarize what is expected from primary treatment:
    a) five day biochemical oxygen demand (BOD5) not to exceed 50 mg/l;
    b) total suspended solids not to exceed 50 mg/l;
    c) total phosphorus not to exceed 1 mg/l; and
    d) E. coli not to exceed 1000 per 100 ml.

Annual Progress Reporting

13. The Licencee shall, upon approval of the Master Plan submitted pursuant to Clause 11 of this Licence, implement the plan such that progress towards meeting the required level of treatment is demonstrated annually by submission of an annual report, due March 31 of each year for the preceding calendar year. Annual submissions shall include the progress made on the plan pursuant to Clause 11 including monitoring results and the work plan for the subsequent calendar year.

MONITORING AND REPORTING

Reporting

14. The Licencee shall, prior to December 31, 2013, develop a notification plan acceptable to the Director for each overflow event.

Interim Monitoring

15. The Licencee shall by January 31, 2014 submit a plan to the Director for approval of an interim combined sewer overflow monitoring program for implementation between May 1, 2014 and the date upon which the final master plan is approved by the Director. The plan shall identify locations to be sampled, rationale for these locations, and sampling frequency. The plan also shall identify constituents to be monitored including, but not limited to:
    a) organic content as indicated by the five-day biochemical oxygen demand (BOD_5) and expressed as milligrams per litre;

b) total suspended solids as expressed as milligrams per litre;
c) total phosphorus content as expressed as milligrams per litre;
d) total nitrogen content as expressed as milligrams per litre;
e) total ammonia content as expressed as milligrams per liter;
f) pH; and
g) *E*.coli content as indicated by the MPN index and expressed as MPN per 100 millilitres of sample.

Record Keeping

16. The Licencee shall:
    a) during each year maintain records of:
        i) grab sample dates and locations;
        ii) summaries of laboratory analytical results of the grab samples; and
        iii) combined sewer overflow dates;
    b) make the records being maintained pursuant to sub-Clause 16 a) of this Licence available to an Environment Officer upon request and, within three months of the end of each year, post the results on the public notification site required by Clause 10 of this Licence.

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, 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*.

"original signed by"

Tracey Braun, M.Sc.
Director
Environment Act

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