
GLOSSARY OF TERMS

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Advice Document:	Project specific guidelines for preparation of the Environmental Impact Assessment as defined by Manitoba Conservation.
Activated Sludge Process:	A biological waste treatment system I which living microbes suspended in a mixture of organic waste and air, absorb the organic pollutants and convert them to stable substances.
Aeration:	The process of being supplied or impregnated with air. Aeration is used in wastewater treatment to foster biological and chemical purification.
Algal Bloom:	A proliferation of living algae on the surface of lakes, rivers or ponds. Algal blooms are stimulated by phosphate enrichment.
Anaerobic:	Living, acting or occurring in the absence of free oxygen; relating or induced by anaerobes.
Anoxic	Without oxygen.
Aquatic:	Growing or living in or frequenting water; taking place in or on water.
Aquatic Biota:	Flora and fauna growing or living in water.
Aquifer:	An underground bed or stratum of earth, gravel or porous stone that contains water.
BEDB:	Brandon Economic Development Board
Benthic:	Relating to or occurring at the bottom of a water body.
Biophysical:	The branch of knowledge concerned with the application of physical principles and methods to biological problems.
Biosolids:	Organic semi-solid wastewater product that is comprised of material removed from the wastewater. Used interchangeably with the term “sludge” in most cases.
Biota:	The flora and fauna of a region.

BOD:	Biochemical Oxygen Demand is the amount of oxygen required by micro-organisms to decompose organic waste in water, a measure of the amount of organic pollution.
CBOD ₅ :	Carbonaceous 5-Day Oxygen Demand
cfs	cubic feet per second
Clarification:	To make water clear or pure by freeing from suspended matter.
Clarifier:	A sedimentation basin or settling tank in which suspended solids settle to the bottom and the clarified water or wastewater is drawn off the top.
COD:	Chemical Oxygen Demand
Coliforms:	A group of mostly harmless bacteria that live in the intestinal tract of warm-blooded animals, including man and that are used as a biological indicator of water pollution and of potentially dangerous bacterial contamination.
Combined Storm Sewer:	A sewerage system that carries both sanitary sewage and storm water runoff. During dry weather, combined sewers carry all wastewater to the treatment plant. During a storm, only part of the flow is intercepted because of plant overloading; the remainder goes untreated to the receiving stream.
DAF:	Dissolved Air Flootation unit used in the pretreatment process.
Denitrification:	Conversion of nitrates to nitrogen gas by bacteria.
E-coli:	A specific type of coliform (<i>Escherichia</i>) that is more representative of fecal sources than other coliform.
Effluent:	The flow of wastewater from a treatment facility or component of the secondary wastewater treatment facility.
EIA or EIS:	Environmental Impact Assessment or Environmental Impact Statement – a document prepared by project proponents outlining the nature of the project and potential impacts on the environment. This is an essential part of the government(s) approval and licencing process.

Eutrophication:	The natural aging of a lake or other water body characterized by high nutrient levels, excessive algal growth and accumulation of bottom sediments.
Expanded IWWTF:	Additional processes added to the IWWTF in order to treat effluent combined from both the first and second shift from the Pork Processing Plant to levels described in the Advice Document of June 10, 2002.
Faecal Coliforms:	A group of bacteria common to the intestinal tracts of man and animals an indicative of sewage or manure contamination of a wastewater or water body.
Fauna:	Animals or animal life developed or adapted to living in a specified environment.
Fertigation:	The provision of plant nutrients through an irrigation delivery system.
Flare Stack:	A waste gas burner that safely flares to the atmosphere excess gas generated in the anaerobic lagoons thereby eliminating the potential for hazardous accumulation of gas and reduction in air pollutants.
Flux:	The rate of liquid (or heat) passing through a surface calculated on the basis of gross area (e.g. litres/m ² /day)
Greenhouse Effect:	The heating effect produced by the atmosphere upon the earth. Light waves from the sun pass through the air and are absorbed by the earth. The earth re-radiates this energy as heat waves that are absorbed by the air, specifically carbon dioxide. The air thus behaves like glass in a greenhouse, allowing the passage of light but not the exiting heat. Thus many scientists theorize that an increase in the atmospheric concentration of carbon dioxide, methane and nitrous oxide is contributing to an increase in the earth's surface temperature or "Global Warming".
Groundwater:	The water contained under the earth's surface in an aquifer or porous media.
ha	Abbreviation for hectares
Heritage Resource:	Item of archaeological, historical, or cultural significance.

Hydrogeology:	The study of groundwater systems and the associated geological formations.
Influent:	The flow of wastewater into the treatment facility or component of the secondary wastewater treatment facility.
Inversion:	An atmospheric condition where a layer of cool air is trapped by a layer of warm air so that it cannot rise. Inversions spread polluted air horizontally rather than vertically so that contaminating substances cannot be widely dispersed. An inversion of several days length can cause an air pollution episode.
IWWTF:	Industrial Waste Water Treatment Facility owned and operated by the City of Brandon used to treat effluent from the single-shift operation of the Pork Processing Plant.
kg/d:	kilograms per day
km:	kilometers
litres/m ² /day	times 0.0205 equals gallons/ft ² /day
Maple Leaf Foods Inc.:	Owner of the Pork Processing Plant in Brandon operating under the name Maple Leaf Pork.
masl	metres above sea level
m ³	cubic meters x 35.31 = ft ³
m ³ /day:	cubic meters per day
m ³ /min:	cubic meters per minute
m ³ /s:	cubic meters per second
mg/l:	milligrams/litre
ml:	milliliters (one thousandth of a litre)
micron:	one thousandth of a millimeter
Mitigation:	A method to cause an impact to become less harsh or hostile.

MSDA:	Material Safety Data Sheets
Nitrification:	The conversion of ammonium into nitrates by bacterial action, causing a decrease in dissolved oxygen levels in water or sewage.
Nitrogenous:	A nitrogen containing substance.
NPRI:	National Pollution Release Inventory
NTU:	Nephelometric Turbidity Unit.
Nutrients:	Elements or compounds essential as raw materials for organism growth and development, for example, carbon, oxygen, nitrogen and phosphorous.
ODS:	Ozone Depleting Substance
Outfall:	The mouth of a sewer, drain or conduit where an effluent is discharged into the receiving waters.
Pathogenic:	Causing or capable of causing disease.
Permeate:	Liquid product of the membrane filtration process.
pH:	The negative logarithm of the effective hydrogen-ion concentration or hydrogen-ion activity in gram equivalents per litre used in expressing both acidity and alkalinity on a scale whose values run from 0 to 14 with 7 representing neutrality; numbers less than 7 increasing acidity and numbers greater than 7 increasing alkalinity.
Pork Processing:	The process of killing and cutting hogs for processing into meat and meat products.
Pretreatment:	In wastewater treatment, any process used to reduce pollution load before the wastewater is delivered to a treatment plant for substantial reduction in pollution load.
Sanitary Landfill:	An engineered facility for disposal of municipal solid waste on land, without endangering public health or causing environmental damage.
Sanitary Sewer:	A sewer that conveys household and commercial sewage.

Sludge:	A slurry or concentrated suspension of solids that accumulates at the bottom of a settling tank, clarifier or anaerobic digester or lagoon.
SOD	Sediment Oxygen Demand is the flux of oxygen from water into the bottom sediments.
Suspended Solids:	Solids carried in water or sewage that would be retained on a glass-fibre filter in a standard laboratory test.
TKN:	Total Kjeldahl Nitrogen-is the specific chemical analytical technique that measures the total nitrogen content of soil, water or other material. This measure includes ammonium nitrogen + nitrate nitrogen + nitrite nitrogen + all forms of organic nitrogen.
TDGA:	Transportation of Dangerous Goods Act
TKN:	Total Kjeldahl Nitrogen
TP:	Total phosphorous
TSS:	Total Suspended Solids
Ungulate:	Hooved quadrupeds such as deer.
Windrose:	Graphical representation of wind direction, speed and frequency over a given time period.