Septic System Permit Application
Permit Package / Worksheets

Project Address: _____

Septic Permit System Summary / Overview

Applicable Law

DocumentsAttached
(check all applicable)

□ Conservation Authority Approval
□ SourceWater Protection
□ Construction in Hazard Lands
□ Site Plan Approval
□ Minor Variance
□ Grading Plan (raised beds)

Total Number of Bedrooms _____ Total Number of Fixture Units _____

Total Finished Floor Area _____m^2 _____sq.ft Daily Design Flow (Q) (litre/day) _____

□ Residential (dwelling) □ Camp for the Housing of Workers □ Other occupancy (Identify) _____

Water Supply:
□ Municipal
□ Dug Well
□ Drilled well
□ Shallow Well Point
□ Other:_____

Type of Native Soil:
_____
□ Soils Analysis attached
Percolation rate ('T' time): _____
Depth to water table: _____
Slope of land in tile bed area _____%

Type of Imported Fill:
_____
□ Soils Analysis attached
Percolation rate ("t" time): _____

Class of System
□Class 2 – Greywater □ Class 4 – Leaching Bed System □ Class 5 – Holding Tank

System Components
(Complete all that apply)
□Septic tank capacity (L) _____
□Pump capacity (L) _____
□Distribution Box
□Other (please specify) _____
□Advance Treatment Unit capacity: (L)_____
Manufacture and Model _____

Method of Distribution Pipe Detection
□magnetic means
□tracer wire (14 gauge TW solid copper light coloured plastic coated)
□other means (please specify) _____

Complete A, B, C, D, E, or F – Class 4 Systems Only

A. ABSORPTION TRENCH
□In-ground □Raised
□ Distributionpipe
□Leachingchambers □ Type I
□ Type II
Lengthofpipe_____m
□ Mantel Required
MantelArea_____m^2

B. FILTER BED
□ In- ground □ Raised
EffectiveArea:_____m^2
ContactArea:_____m^2
□ Distribution pipe
□Leachingchambers □Type I
□ Mantel Required □Type II
MantelArea_____

C. SHALLOW BURIED TRENCH
Type: _____
Length of chamber: _____m

D. ADVANCE TREATMENT SYSTEM (BMEC & CAN/BNQ)
□ BMEC authorization provided
□CAN/BNQauthorizationprovided
□Service agreement provided
Mantel area: _____m^2
Stone layer area: _____m^2
Sand layer area: _____m^2
□System specifications provided
□Manufacturer's installation manual provided

E. TYPE A DISPERSAL BED
□ In- ground □ Raised
Lengthofpipe_____m
MantelArea_____m^2
Stonelayerarea:_____m^2
Sandlayerarea:_____m^2

F. TYPE B DISPERSAL BED
□In-ground □Raised
Stonelayerarea_____m2
Linearloadingrate □ 40 L/m
□ 50 L/m

Worksheet A: Dwellings - Daily Design Flow Calculations (Q)

A) Residential Occupancy		(Q) Litres	Total
Numberof Bedrooms	1Bedroom	750	
	2Bedrooms	1100	
	3Bedrooms	1600	
	4Bedrooms	2000	
	5Bedrooms	2500	
		Subtotal (A)	

B) Plus Additional Flow for: **Note:** Use the largest additional flow calculation to determine Daily Design Flow (Q). If none apply Subtotal (B) is zero.		Quantity	(Q) Litres	Total
Either	Each bedroom over 5		500	
Or	Floor space for each $10m^2$ over $200m^2$ up to $400m^2$		100	
	Floor space for each $10m^2$ over $400m^2$ up to $600m^2$		75	
	Floor space for each $10m^2$ over $600m^2$		50	
Or	Each Fixture Unit over 20 fixture Units *(TotalofWorksheetB - 20=Quantity)*		50	
			Subtotal (B)	
			Subtotal A+B=Daily Design Flow (Q)	

Worksheet B: Dwellings Fixture Unit Count

Fixtures	Units	How Many?	Total
Bath group (toilet, sink, tub or shower) with flush tank	6.0	X =	
Bathtub only(with or without shower)	1.5	X =	
Shower stall	1.5	X =	
Wash basin / Lavatory (1.5 inch trap)	1.5	X =	
Water closet (toilet) tank operated	4.0	X =	
Bidet	1.0	X =	
Dishwasher	1.0	X =	
Floor Drain (3 inch trap)	3.0	X =	
Sink (with/without garbage grinder, domestic and other small type single, double or 2 single with a common trap)	1.5	X =	
Domestic washing machine			
Combination sink and laundry tray single or double (installed on 1.5 inch trap)	1.5	X =	
Other:			
		Total Number of Fixture Units:	

1. Refer to Ontario Building Code Division B Table 7.4.9.3 for a complete listing of fixture types and units.
2. Where the laundry waste is not more than 20% of the total daily design flow, it may discharge to the sewage system. OBC 8.1.3.1(2)
3. Sump pumps are not to be connected to the sewage system. Connection to sewage system may lead to a hydraulic failure of the system.

Worksheet C: Other occupancies types

Camp for the Housing of Workers	Number of Employees	(Q) Litres	Total
Note:building size, number of bedrooms and fixture count are not requiredfor a Camp for the Housing of Workers		250	
		Daily Design Flow (Q)	

Other Occupancy Daily Design Flow Calculation (Q)

To calculate the daily design flow for occupancies, please refer to Ontario Building Code Division B – Part 8 Table 8.2.1.3.B

Establishment	Operator Example: numberofseats,per floor area, number of employees/students	Volume Litres	Total
		Daily Design Flow (Q)	

Work Sheet D: Septic Tank Size

MinimumseptictanksizepermittedbytheOntarioBuilding Code is 3600 litres.

Occupancy type	Daily Design Flow (Q)	Minimum tank size (L)
Residential Occupancy house, apartment camp forhousing of workers	x 2 =	
All Other Occupancies	x 3 =	

Worksheet E: Leaching Bed Calculations (Class 4)

Part 1: Complete All

Typeofleachingbed(select one)

□ A. Absorption trench □ D. Advance Treatment □ B. Filter Bed □ C. Shallow Buried Trench
System Percolation rate of native soil (T): □ E. Type A Dispersal Bed □ F. Type B Dispersal Bed

Name of licensed testing agency:

□ In ground system
□ Raised Bed system

Mantel (if applicable) □ Imported □ Native Soil	Height raised above original grade (metres)

Q/loading rate = _____m2 Configured as: _____ m X _____ m

Part 2: Complete One of A, B, C, D, E, F

□ A. Absorption Trench

Total length of distribution pipe	**Conventional** (QxT)÷200= _____ m **Type I leaching chambers** (Q x T) ÷ 200 = _____ m **Type II leaching chambers** (Q x T) ÷ 300 = _____ m **Configured as:** _____runs of _____ m Total: _____ m

□ B. Filter Bed

Effective Area If Q ≤ 3000 litres per day use Q ÷ 75 If Q > 3000 litres per day use Q ÷ 50 Level II-IV treatment units, use Q ÷ 100 **Distribution Pipe Contact Area = (Q x T) ÷ 850 Mantel** (see Part 1)	**Effective area:** _____ (Q) ÷ _____ (75, 50, or 100) = _____ m^2 Configured as: _____ m x _____ m Number of beds _____ Number of runs: _____ Spacing of runs: _____ m **Contact Area**: (_____ (Q) X _____ (T)) ÷ 850 = _____m^2 _____m^2

□ C. Shallow Buried Trench

Percolation time (T) of soil in minutes:	Length of distribution pipe (metres)
1 < T ≤ 20	Q ÷ 75 metres
20 < T ≤ 50	Q ÷ 50 metres
50 < T < 125	Q ÷ 30 metres

(L) = _____ (Q) ÷ _____ (75, 50, 30) = _____ m
Configured as: _____ runs of _____ m Total: _____ m

□ D. Advance Treatment System

Provided BMEC or CAN/BNQ approval, and manufacturer's system design documentation.

□ E. Type A Dispersal Bed

StoneLayer If Q ≤ 3000 litres per day, use Q ÷ 75 If Q > 3000 litres per day, use Q ÷ 50 **Sand Layer** 1 < T ≤ 15 use (Q x T) ÷ 850 T > 15 use (Q x T) ÷ 400	**Stone Layer** = _____(Q) ÷ _____ (75 or 50) = _____m^2 **Sand Layer** = (_____ (Q) x _____ (T)) ÷ (850 or 400) = _____m^2

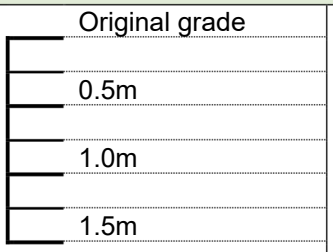
□ F. Type B Dispersal Bed

Area = (Q X T) ÷ 400 **Linear Loading Rate (LLR)** T< 24 minutes, use 50 L/min IfT ≥ 24 minutes, use 40 L/min **Distribution Pipe**	**Area** = (_____(Q) x _____ (T)) ÷ 400 = _____ m2 **Pump chamber capacity** = _____ L **Length (Q ÷ LLR**) = _____ m **Bed configuration** = _____m x _____ m = _____ m2 Number of Beds = _____ Configured as: _____ runs of _____m Total: _____m

Worksheet F: Cross Sectional Drawings

Subsoil Investigation – Test pit

1. Soil sample to be taken at adepth of
2. Test pit to be a minimum 0.9m

Indicate level of rock and ground water level below original grade.		Soil and subgrade investigation. Indicate soil types

Cross sectional drawings are required for all septic systems

1. Locationof existinggrade.
2. Measurements to each component, distances to water table
3. Label each septic component.

Worksheet G: Septic Plot Plan

Pleaseprovidethefollowinginformationon this work sheet:

1. Location of sewagesystem and its components (e.g. tank, leachingbed, pump chamber)
2. Location of all buildings, pools and wells on the property and neighbouring properties
3. Locate and show minimum clearances for treatment units and distribution piping of items. Ontario Building Code, Division B, Table 8.2.1.6.A. and 8.2.1.6.B.
4. Locationof propertylines, easements, and utilitycorridors.