

## CLASS 5 SYSTEM DESIGN CALCULATIONS

### Holding Tank

To be submitted with application package

#### DAILY SEWAGE FLOW CALCULATION

Based on Hydraulic Loads for Number of Bedrooms **and** the greater of Fixtures **or** Floor Area.

FIXTURES			
Plumbing Fixture Description	Total # of Fixtures in Final Project Design	Unit	Total # of Fixture Units
Bathroom Group (includes toilet, sink and bathtub and/or shower)		x 6 =	
Toilet (alone)		x 4 =	
Washbasin		x 1.5 =	
Bathtub or Shower		x 1.5 =	
Kitchen Sink		x 1.5 =	
Bar Sink		x 1.5 =	
Dishwasher		x 1.5 =	
Washing Machine		x 1.5 =	
Bidet		x 1 =	
Laundry Tub		x 1.5 =	
Other			
Add units in last column			↓
Total Fixture Units =			

FLOOR AREA	
Proposed	m <sup>2</sup>
Existing	m <sup>2</sup>
Total Finished Footprint:	m <sup>2</sup>
To convert ft <sup>2</sup> to m <sup>2</sup> , simply multiply ft <sup>2</sup> by 0.093 e.g. 150 ft <sup>2</sup> x 0.093 = 13.95 m <sup>2</sup>	

Residential Occupancy	Final Project Design	(Q) in L	Total
1 Bedroom		750	
2 Bedrooms		1100	
3 Bedrooms		1600	
4 Bedrooms		2000	
5 Bedrooms		2500	
<b>PLUS</b> Additional Flow For:			
Each Bedroom over 5		500	
<b>OR *</b>			
Floor Space for each 10m <sup>2</sup> over 200 m <sup>2</sup> up to 400 m <sup>2</sup>		100	
Floor Space for each 10m <sup>2</sup> over 400 m <sup>2</sup> up to 600 m <sup>2</sup>		75	
Floor Space for each 10m <sup>2</sup> over 600 m <sup>2</sup>		50	
<b>OR *</b>			
Each fixture unit over 20 fixture units		50	
Add units in last column *			↓
Total Daily Design Flow (Q) =			

**\*NOTE:** Where you need to do multiple calculations, signified by the "OR" in the table, do the calculation for daily sewage flow based on bedrooms first, then use the largest additional flow calculation added to the bedroom calculation to determine the Total Daily Sewage Flow (Q)

**TOTAL DAILY DESIGN SEWAGE FLOW (Q) = \_\_\_\_\_ Litres**

**(Q) x 7 = \_\_\_\_\_ Litres MINIMUM HOLDING TANK CAPACITY**



# DESIGN LAYOUT ON-SITE SEWAGE SYSTEMS AND BUILDING PERMITS

Application Number \_\_\_\_\_

<b>ROLL NUMBER:</b>		<b>OWNER:</b>				
<b>PROPERTY ADDRESS:</b>		<b>DESIGNER:</b>	<b>EF/WBF#:</b>			
<b>LEGAL DESCRIPTION:</b>		<b>INSTALLER:</b>	<b>BCIN:</b>			
<small>FROM YOUR WORKSHEET STATE NO. OF FIXTURE UNITS</small>	<small>NO. OF BEDROOMS OR OCCUPANCY</small>	<small>SIZE OF FINISHED FLOOR AREA</small>	<small>TOTAL DAILY DESIGN SEWAGE FLOW IN LITRES</small>			
			Q =			
<b>CLASS 1,2,3 SEWAGE SYSTEM PROPOSAL DETAILS</b>			<b>PROPOSED WATER SUPPLY</b>			
			<small>MUNICIPAL</small> <small>Dug/Bored Well Well Depth</small>	<input type="checkbox"/>	<small>PRIVATE</small> <small>DRILL WELL CASING SIZE</small>	<input type="checkbox"/>
<small>DIMENSIONS OF SYSTEM</small>			<b>CLASS 4,5 SEWAGE SYSTEM PROPOSAL DETAILS</b>			
<small>WORKING CAPACITY OF SEPTIC OR HOLDING TANK</small>	<small>SIZE OF PUMP CHAMBER</small>	<small>LINEAL METRES OF LEACHING PIPE</small>	<small>FILTER BED SIZE SQUARE METRES</small>	<small>CONTACT AREA SIZE SQUARE METRES</small>	<small>DEPTH OF FILL</small>	<small>PERCOLATION TIME OF SOIL NATIVE IMPORTED</small>
<small>LITRES</small>						<small>T =</small>
<b>Directions to Lot - Hwy No., Secondary Roads, Signs to Follow, etc.</b>						

**THE SITE PLAN SHALL SHOW**  
The location of existing buildings, proposed buildings, water supply, existing sewage systems, property lines, surface water (lake, river, etc.), and any neighbours wells, etc.

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<b>INSPECTOR COMMENTS</b>

**SIDE PROFILE**  
Indicate foundation depth in relation to all components of the sewage system, including clearances to the groundwater table, bedrock, or soil with a percolation rate greater than 50 min/cm. If additional fill is required, please indicate the height above existing grade.

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**INSPECTION REPORT**

INSPECTION	SUB-SURFACE CONDITIONS OBSERVED		
DATE _____ TIME _____ AM / PM REPRESENTING OWNER / INSTALLER	ROCK & GWT	M	FT
	_____	0.3	1 _____
	_____	0.6	2 _____
	_____	0.9	3 _____
	_____	1.2	4 _____
	_____	1.5	5 _____
			SOIL TYPE

PROPOSAL MEETS ONTARIO BUILDING CODE REQUIREMENTS     YES     NO

INSPECTORS SIGNATURE \_\_\_\_\_    DATE \_\_\_\_\_

PRINT NAME