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A Natural Attraction

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Planning & Development Services

Procedures for an Application for a Sewage System Permit

This Package Contains:

1. Application for a Sewage System Permit
2. Ontario Building Code Application for a Permit to Construct or Demolish
3. Proposed Sewage Disposal System Design Form
4. Calculation Sheet
5. Ontario Building Code and Guide Sheet

The following forms must be completed and returned to the City of Quinte West along with the appropriate fee to complete the application.

1. Application for a Sewage System Permit
Note: Owner's signature must be provided or a letter from the owner appointing an Authorized Agent.
2. Ontario Building Code Application for a Permit to Construct or Demolish
3. Proposed Sewage Disposal System Design Form for sewage systems described in the Ontario Building Code. Other approved sewage systems (B.M.E.C. approved)

The Building Code Act does not allow the issuance of permits based on incomplete applications.

Building Inspectors can only provide comments based on complete applications and plans. Therefore incomplete applications will be returned to the Owner, or their Authorized Agent.

Once the completed application has been reviewed, an inspector will visit the property to inspect the test hole and site. The applicant will be either issued a permit to install the system or the reasons provided as to why a permit cannot be issued.

Information provided in this package is limited, and it is the responsibility of the applicant to ensure compliance with all applicable sections of the Ontario Building Code.



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Building Services
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Application for a Sewage System Permit

OFFICE USE ONLY

Application number:	Permit number (if different):
Date received:	Roll number:

Application submitted to: City of Quinte West
 (Name of municipality, upper-tier municipality, board of health or conservation authority)

- NAME OF OWNER: _____ TEL. NO.: _____
MAILING ADDRESS: _____
 - PROPOSE TO: _____ A _____ OR _____
 Install or Repair Holding Tank, Leaching Bed System, Filter Bed, Other Treatment Unit and/or System Other (Privy, Greywater System). If other than a privy, specify make and model number
 - TYPE OF BUILDING: _____
(Single Family Dwelling, Apartment Building, Motel, Etc.)
 - LOCATION: _____
 - STATE THE NUMBER OF:
 Bedrooms Showers & Bathtubs Wash Basins Laundry Units Toilets Kitchen Sinks Hot Tubs * Swimming Pools* Water Treatment Devices*
- *NOTE: these items should not drain water to a sewage disposal system.
- TOTAL AREA OF LIVING SPACE ON PROPERTY (includes guest cabins, bunkies, etc.): _____ m²
 - WATER SUPPLY: Dug Well Municipal System Drilled Well (Depth of Steel Casing) _____ Metres
 Other _____
 Proposed or Existing

IMPORTANT INFORMATION!

- If the application is for holding tank, a signed pump-out agreement must be attached.
- To determine the type and depth of soil in the proposed leaching bed, three test pits must be excavated to a MINIMUM DEPTH of 1.5 metres (or a least to rock or water) prior to inspection. Please advise when test pits are ready. It is suggested that a protective cover or fencing be placed over the hole.
- Post the completed Lot Identification Card, at the roadside, where it can be seen form the point of access to your lot.
Note: Are the test pits ready? The inspection of the property will not be made until you notify us that the three test pits have been provided.

THE REVERSE SIDE OF THIS APPLICATION MUST BE COMPLETED!

DIRECTIONS TO PROPERTY

(Show Highway No., Secondary Road, Signs to Follow, Landmarks, 911 Address, Etc.)

A large, empty rectangular box with a thin black border, occupying the majority of the page below the text. It is intended for the user to write the directions to the property.



Building Services
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Application for a Permit to Construct or Demolish

This form is authorized under subsection 8(1.1) of the Building Code Act

For use by Principal			
Application number:	Permit number (if different):		
Date received:	Roll number:		
Application submitted to: <u style="text-decoration: underline;">City of Quinte West</u> <small>(Name of municipality, upper-tier municipality, board of health or conservation authority)</small>			
A. Project information			
Building number, street name		Unit number	Lot/con.
Municipality	Postal code	Plan number/other description	
Project value est. \$		Area of work (m ²)	
B. Purpose of application			
<input type="checkbox"/> New construction <input type="checkbox"/> Addition to an existing building <input type="checkbox"/> Alteration/repair <input type="checkbox"/> Demolition <input type="checkbox"/> Conditional Permit			
Proposed use of building		Current use of building	
Description of proposed work			
C. Applicant Applicant is: <input type="checkbox"/> Owner or <input type="checkbox"/> Authorized agent of owner			
Last name	First name	Corporation or partnership	
Street address		Unit number	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax ()		Cell number ()
D. Owner (if different from applicant)			
Last name	First name	Corporation or partnership	
Street address		Unit number	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax ()		Cell number ()

E. Builder (optional)			
Last name	First name	Corporation or partnership	
Street address		Unit number	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ()	Fax ()		Cell number ()
F. Tarion Warranty Corporation (Ontario New Home Warranty Program)			
i.	Is proposed construction for a new home as defined in the Ontario New Home Warranties Plan Act? If no, go to section G.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
ii.	Is registration required under the Ontario New Homes Warranties Plan Act?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
iii.	If yes to (ii) provide registration number(s): _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No
G. Required Schedules			
i.	Attached Schedule 1 for each individual who reviews and takes responsibility for design activities.		
ii.	Attach Schedule 2 where application is to construct on-site, install or repair a sewage systems.		
H. Completeness and compliance with applicable law			
i.	The application meets all the requirements of clauses 1.3.3 (5) (a) to (d) of Division C of the Building Code (the application is made in the correct form and by the owner or authorized agent, all applicable fields have been completed on the application and required schedules, and all required schedules are submitted). Payment had been made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the <i>Building Code Act, 1992</i> , to be paid when the application is made.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
ii.	This application is accompanied by the plans and specification prescribed by the applicable by-law, resolution or regulation made under clause (7)(1)(b) of the <i>Building Code Act, 1992</i> .	<input type="checkbox"/> Yes	<input type="checkbox"/> No
iii.	This application is accompanied by the information and documents prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the <i>Building Code Act, 1992</i> which enables the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
iv.	The proposed building, construction or demolition will not contravene any applicable law.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
I. Declaration of applicant			
I _____ declare that:			
(print name)			
1. The information contained in this application, attached schedules, attached plans and specifications, and other attached documentation is true to the best of my knowledge.			
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.			
Date _____		Signature of Applicant _____	

Personal information contained in this form and schedules is collected under the authority of subsection 8(1.1) of the *Building Code Act, 1992*, and will be used in the administration and enforcement of the *Building Code Act, 1992*. Questions about the collection of personal information may be addressed to: a) the Chief Building Official of the municipality or upper-tier municipality to which this application is being made, or, b) the inspector having the powers and duties of a chief building official in relation to sewage systems or plumbing for an upper-tier municipality, board of health or conservation authority to whom this application is made, or, c) Director, Building and Development Branch, Ministry of Municipal Affairs and Housing 777 Bay St., 2nd Floor. Toronto, M5G 2E5 (416) 585-6666.

Schedule 1: Designer Information

A. Project information			
Building number, street name		Unit number	Lot/con.
Municipality	Postal code	Plan number/other description	
B. Individual who reviews and takes responsibility for design activities			
Name		Firm	
Street address		Unit number	Lot/con/
Municipality	Postal Code	Province	E-mail
Telephone number ()	Fax number ()		Cell number ()
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]			
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings	<input type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection	<input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems	
Description of designer's work			
D. Declaration of Designer			
I _____ declare that (choose on as appropriate): <div style="text-align: center;">(Print name)</div>			
<input type="checkbox"/> I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____			
<input type="checkbox"/> I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: _____ Basis for exemption from registration: _____			
<input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that: <ol style="list-style-type: none"> 1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm. 			
_____ Date		_____ Signature of Designer	

- Note:**
1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d). of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
 2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of practice, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

Schedule 2: Sewage System Installer Information

A. Project information

Building number, street name		Unit number	Lot/con.
Municipality	Postal code	Plan number/other description	

B. Sewage system installer

Is the installer of the sewage system engaged in the business of constructing on-site, installing, repairing, servicing, cleaning or emptying sewage systems, in accordance with Building Code Article 3.3.1.1. Division C?

- Yes (Continue to Section C)
 No (Continue to Section E)
 Installer unknown at time of application (Continue to Section E)

C. Registered installer information (where answer to B is "Yes")

Name		BCIN	
Street Address		Unit number	Lot/con.
Municipality	Postal Code	Province	E-mail
Telephone number ()	Fax ()	Cell number ()	

D. Qualified supervisor information (where answer to B is "Yes")

Name of qualified supervisor(s)	Building Code Identification Number (BCIN)

E. Declaration of applicant

I _____ declare that (choose on as appropriate):
 (Print name)

- I am the applicant for the permit to construct the sewage system. If the installer is unknown at the time of application, I shall submit a new Schedule 2 prior to construction when the install is known.

OR

- I am the holder of the permit to construct the sewage system, and am submitting a new Schedule 2, now that the installer is known.

I certify that:

1. The information contained in this schedule is true to the best of my knowledge.
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.

_____ Date

_____ Signature of applicant



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PROPOSED SEWAGE DISPOSAL SYSTEM DESIGN

Owner of Property: _____

- 1) TOTAL DAILY DESIGN SEWAGE FLOW: _____ LITERS PER DAY
- 2) NATIVE SOIL PERCOLATION RATE: _____ MIN/CM (Provide lab test if under 50)
- 3) SEPTIC TANK SIZE: _____ LITERS
- 4) LEACHING BED DESIGN: **Complete A or B, C & D**

A. Absorption Trench System _____ metres of piping

Fill Required: Yes No (Circle) Depth of Fill: _____ metres

Please indicate the depth of the bottom of the stone layer either above or below original grade:*

Bottom of Stone Layer _____ metres Below/Above Original Grade (please circle)

B. Filter Bed Size _____ m² Filter Sand Contact Area _____ metres

Fill Required: Yes No (Circle) Depth of Fill: _____ metres

Please indicate the depth of the bottom of the stone layer either above or below original grade:*

Bottom of Stone Layer _____ metres Below/Above Original Grade (please circle)

C. Loading Rate Area _____ m²

D. 15 metre constructed mantle required:

Yes No (Circle)

*NOTE: At least 900mm above the high ground water table, rock or soil with a percolation time greater than 50 minutes.

Side View Profile of Sewage System

NOTE: Show elevation above water table, bedrock or impermeable layer, existing grade etc.
Show elevation of finished grade with respect to original grade.

Proposed Design Site Plan

Indicate North Point and show the following required information:

- | | | |
|--------------------------------------|---------------------------|-----------------------------------------------------------|
| 1. Septic Tank and Leaching Bed | 7. Existing Sewage System | 13. Topographical Features
(steep slopes, swamps etc.) |
| 2. Pump Chamber | 8. Driveways | 14. Direction of Slope |
| 3. Loading Rate Area | 9. Surface Waters | 15. Direction of Surface and
Ground Water Flow |
| 4. 15 metre Mantle Area | 10. Property Lines | |
| 5. Proposed Structure | 11. Foundation Drain | |
| 6. Water Supplies (incl. neighbours) | 12. Eavestrough Discharge | |

Note: The loading rate area and the 15 metre mantle area are to be free of structures.





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Calculation Sheet

Ontario Building Code Proposed Requirements – Residential Sewage Disposal System

Name: _____

1. Sewage Flow

a) Number of bedrooms: _____ = _____ Litres (1)

b) Living space: _____ m² **ADD**
 Each 10 m² over 200 m² up to 400 m²: _____ x 100 = _____ Litres
 Each 10 m² over 400 m² up to 600 m²: _____ x 75 = _____ Litres

OR ADD (whichever is the larger flow) _____ Litres (2)

c) Total Fixture Units: _____
 Each Fixture Unit over 20: _____ x 50 = _____ Litres (3)

Total Sewage Flow: (Q) (Add 1 + 2 or 3) _____ Litres

2. Septic Tank Size

Residential Occupancy: Q Sewage Flow: _____ x 2 = _____ Litres (Minimum – 3600 Litres)
 Commercial: Q Sewage Flow: _____ x 3 = _____ Litres

3. **Percolation rate from Test Hole Soil Conditions** T Time = _____ min/cm
 Or Lab Test

4. Leaching Bed Size

Length of Pipe = Q Sewage Flow x T Percolation Time

$L = \frac{QT}{200} = \frac{X}{200} =$ _____ m. of pipe _____ ft. of pipe

5. Filter Bed Size

Q Sewage Flow \leq 3000 Litres/Day: Q Sewage Flow \div 75 = m²
 _____ \div 75 = _____ m² of filter bed

Q Sewage Flow \geq 3000 Litres/Day: Q Sewage Flow \div 50 = m²
 _____ \div 50 = _____ m² of filter bed

6. Filter Bed Contact Area of Filter Sand

Area = $\frac{Q \text{ Sewage Flow} \times T \text{ Percolation Time}}{850} =$ _____ m² filter sand contact area

A = $\frac{QT}{850} = \frac{X}{850} =$ _____ m² filter sand contact area

Expanded filter sand contact area is to be no less than the filter bed size.

7. Loading Rate for Fill-Based Absorption Trenches and Filter Beds

Loading Rates	Percolation Time	Loading Rate (L.m ² /day)
	1-20	10
	20-35	8
	35-50	6
	>50	4

Q Sewage Flow \div Loading Rate = _____ m² of 250 mm of unsaturated soil or leaching bed fill

_____ \div _____ = _____ m² of 250 mm of unsaturated soil or leaching bed fill

TEST PIT CONDITIONS

Depth (metres)	Soil Types
0 _____	
0.5 _____	
1.0 _____	
1.5 _____	
Show Rock Elevation _____	
Show Water Table _____	Spring HWT

Ontario Building Code & Guides

Table 7.9.4.3.
Minimum Permitted Size of Fixture Outlet Pipe and Hydraulic Loads for Fixtures

Fixture	Min. Size of Fixture Outlet Pipe, in.	Hydraulic Load, fixture units
Autopsy table	1½	2
Bathroom group		
a) with flush tank		6
b) with direct flush valve		8
Bathtub (with or without shower)	1½	1½
Bathtub: foot, sitz, or slab	1½	1½
Bed pan washer	3	6
Beer cabinet	1½	1½
Bidet	1¼	1
Chinese range	1½	3
Clothes washer		
a) domestic	N/A	1½ with 2 in. trap
b) commercial	N/A	2 with 1½ in. trap
Dental unit or cuspidor	1¼	1
Dishwasher		½
a) domestic	1½	no load when connected to garbage grinder or domestic sink
b) commercial type	2	3
Drinking fountain	1¼	½
Fish tank or tray	1½	1½
Floor drain	2	2 with 2 in. trap 3 with 3 in. trap
Garbage grinder	2	3
Icebox	1¼	1
Laundry tray		
a) single or double units or 2 single units with common trap	1½	1½
b) 3 compartments	1½	2
Lavatory		
a) barber or beauty parlor	1½	1½
b) dental	1¼	1
c) domestic type single, or 2 single with common trap	1¼	1 with 1¼ in. trap 1½ with 1½ in. trap
d) multiple or industrial type	1½	3
Potato Peeler	2	3
Shower drain		
a) from 1 head	1½	1½
b) from 2 or 3 heads	2	3
c) from 4 to 6 heads	3	6
Sink		
a) domestic and other small type with or without garbage grinders, single, double, or 2 single with a common trap	1½	1½
b) other sinks	1½	1½ with 1½ in. trap 2 with 2 in. trap 3 with 3 in. trap
Urinal		
a) pedestal, siphon jet or blowout type	2	4
b) stall, washout type	2	2
c) wall		
i) washout type	1½	1½
ii) other types	2	3
Water closet		
a) with flush tank	3	4
b) with direct flush	3	6

Table 8.2.1.3.A.
Residential Occupancy

Residential Occupancy	(litres)
Apartments, Condominiums, Other Multi-family Dwellings - per person ¹	275
Boarding Houses	
a) Per person,	
i) with meals and laundry facilities, or,	200
ii) without meals or laundry facilities, and	150
b) Per non-resident staff per 8 hour shift	40
Boarding School - per person	300
Dwellings	
a) 1 Bedroom Dwelling	750
b) 2 Bedroom Dwelling	1100
c) 3 Bedroom Dwelling	1600
d) 4 Bedroom Dwelling	2000
e) 5 Bedroom Dwelling	2500
f) Additional flow for ⁽²⁾	
i) each bedroom over 5,	500
ii) A) each 10 m ² (or part thereof) over 200 m ² up to 400 m ² ⁽³⁾ ,	100
B) each 10 m ² (or part thereof) over 400 m ² up to 600 m ² ⁽³⁾ , and	75
C) each 10 m ² (or part thereof) over 600 m ² ⁽³⁾ , or	50
iii) each fixture unit over 20 fixture units	50
Hotels and Motels (excluding bars and restaurants)	
a) Regular, per room	250
b) Resort hotel, cottage, per person	500
c) Self-service laundry, add per machine	2500
Work Camp/Construction Camp, semi-permanent per worker	250

Table 8.2.1.5.
Clearance Distances for Sewage Systems

Clearance Distances for Class 1, 2 and 3 Sewage Systems				
	Minimum horizontal distance in metres from a spring used as a	Minimum horizontal distance in metres from a lake, river, pond, stream, reservoir, or a spring not used as source of potable water.	Minimum horizontal distance in metres from a Property Line.	
Earth Pit	15	30	15	3
Privy				
Privy Vault	10	15	10	3
Pail Privy				
Greywater System	10	15	15	3
Cesspool	30	60	15	3

**Table 8.2.1.6.A. (Septic Tank)
Minimum Clearances for Treatment Units**

Structure	15 m
Well	15 m
Lake	15 m
Pond	15 m
Reservoir	15 m
River	15 m
Spring	15 m
Stream	15 m
Property Line	3m

**Table 8.2.1.6.B.
Minimum Clearances for Distribution Pipe**

Structure	5m
Well with a watertight casing to a depth of 6 m	15 m
Any other well	30 m
Lake	15m
Pond	15m
Reservoir	15m
River	15 m
A spring not used as a source of potable water	15 m
Stream	15 m
Property Line	3 m

**Table 8.2.1.6.C.
Minimum Clearance for Holding Tanks**

Structure	1.5 m
Well with a watertight casing to a depth of at least 6 m	15 m
Any other well	15 m
A spring	15 m
Property Line	3 m

*NOTE:

- All clearances are increased by twice the height that the leaching bed/filter bed is raised above the original ground.
- Greywater systems must be maintained at least 5 metres from any structure.

**Table 2.
Soil Percolation Rates**

Soil Type (unified soil classification)	Coefficient of Permeability K - cm/sec.	Percolation Time - T mins/cm.	Comment
Coarse Grained - More than 50% larger than #200			
G.W. - Well graded gravels, gravel-sand mixtures, little or no fines.	10	<1	very permeable unacceptable
G.P. - Poorly graded gravels, gravel-sand mixtures, little or no fines.	10-1	<1	very permeable unacceptable
G.M. - Silty gravels, gravel sand-silt mixtures.	10 ⁻² -10 ⁻⁴	4-12	Permeable to medium permeable depending on amount of silt.
G.C. - Clayey gravels, gravel-sand-clay mixtures.	10 ⁻⁴ -10 ⁻⁶	12-50	Important to estimate amount of silt and clay.
S.W. - Well-graded soils, gravelly sands, little or no fines.	10 ⁻¹ -10 ⁻⁴	2-12	medium permeability
S.P. - Poorly graded sands, gravelly sand, little or no fines.	10 ⁻¹ -10 ⁻³	2-8	medium permeability
S.M. - Silty sands, sand-silt mixtures.	10 ⁻³ -10 ⁻⁵	8-20	medium to low permeability
S.C. - Clayey sands, permeability sand-clay mixtures.	10 ⁻⁴ -10 ⁻⁶	12-50	medium to low (depends on amount of clay)

**Table 3.
Approximate Relationship of Soil Types to Permeability and Percolation Time**

Soil Type (unified soil classification)	Coefficient of Permeability K - cm/sec.	Percolation Time - T mins/cm.	Comment
Coarse Grained - More than 50% larger than #200			
M.L. - Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, clayey silts with slight plasticity.	10 ⁻⁵ - 10 ⁻⁶	20 - 50	medium to low permeability
C.L. - Inorganic clays of low to medium plasticity gravelly clays, sandy clays, silty clays, lean clays.	10 ⁻⁶ and less	over 50	unacceptable
O.L. - Organic silts, organic silty clays of low depends plasticity; liquid limit less than 50	10 ⁻⁵ and less	20 - over 50	acceptable on clay content.
M.H - Inorganic silts, micaceous or diatomaceous fine sandy soil or silty soils, elastic silts	10 ⁻⁶ and less	over 50	unacceptable
C.H - Inorganic clays of medium to high plasticity, organic silts	10 ⁻⁷ and less	over 50	unacceptable
O.H - organic clays of medium to high plasticity organic silt; liquid limit over 50	10 ⁻⁶ and less	over 50	unacceptable

