Ontario Onsite Wastewater Association

Septic Systems 101

FOCA
Annual General Meeting
Nov. 22/08

Who is OOWA?

The **Ontario Onsite Wastewater Association (OOWA)** established in 1999 is dedicated to providing education, information and resources to a large network of onsite wastewater professionals as well as the general public.

OOWA is at the front line of development to support tertiary onsite systems as a viable permanent wastewater servicing option to protect our water resources

Septic Systems 101

Review Basics

Common Systems

Operation & Maintenance

Septic Failures

Treatment Technologies

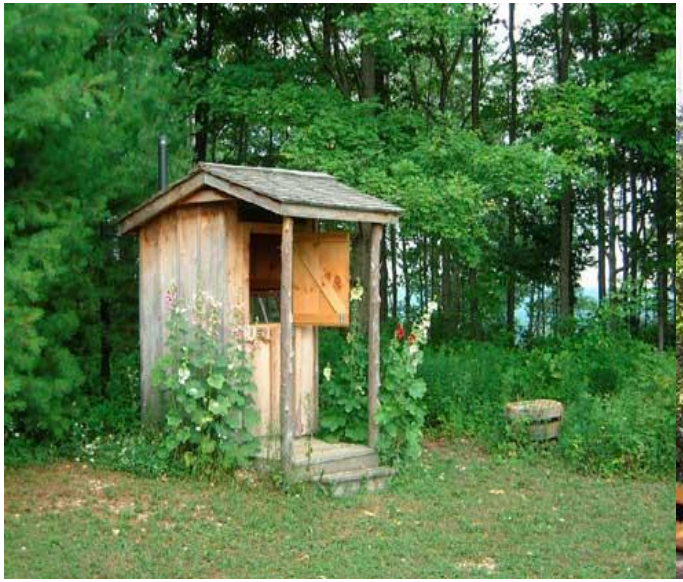
Septic Systems 101

It is estimated there are approx.
1 million septic systems in the province

Fewer than 30% are serviced by onsite professionals

The discharge is estimated to be billions of litres per year into the environment

Class 1 - Outhouse



Includes a structure designed to receive
and dispose of human waste in a pit in the earth

Earth Pit Privy

- The bottom of the earth pit privy (outhouse) must be constructed so the bottom of the pit is at least 900mm above the ground water table, or bed rock
- The sides of the pit must be reinforced and surrounded on all sides and bottom by not less then 600 mm of soil or leaching bed fill
- The soil around the superstructure, must be raised or mounded to a height of 150mm (6”) above the ground

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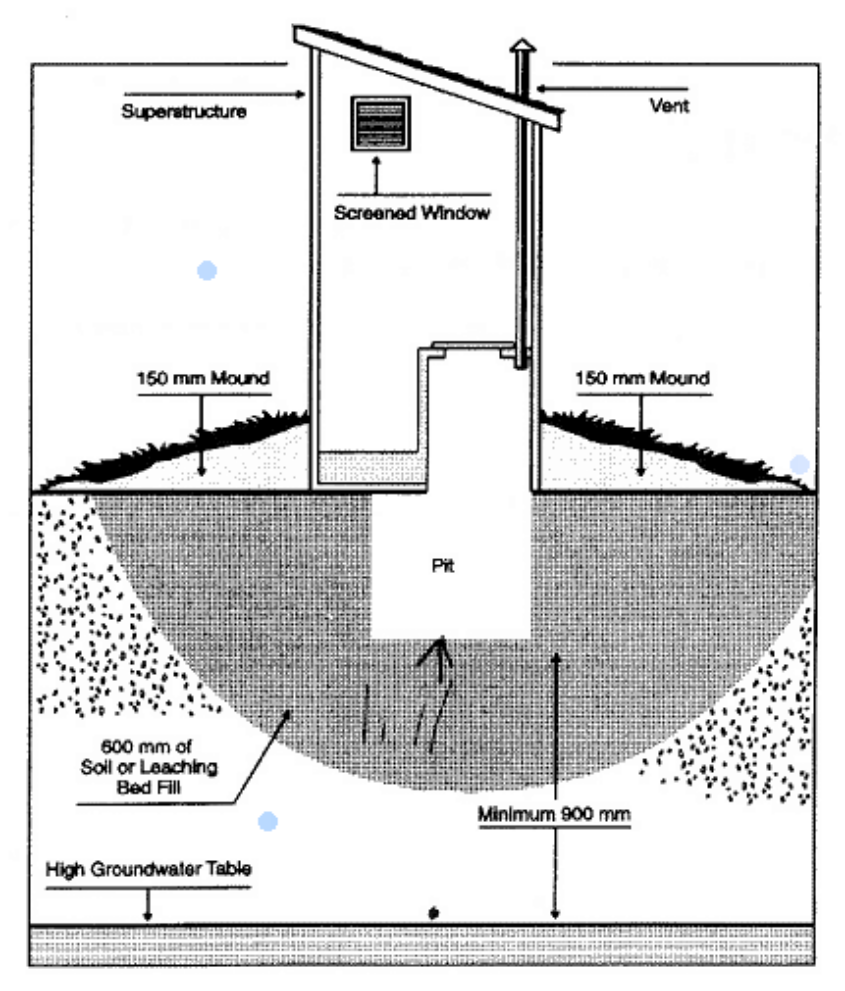
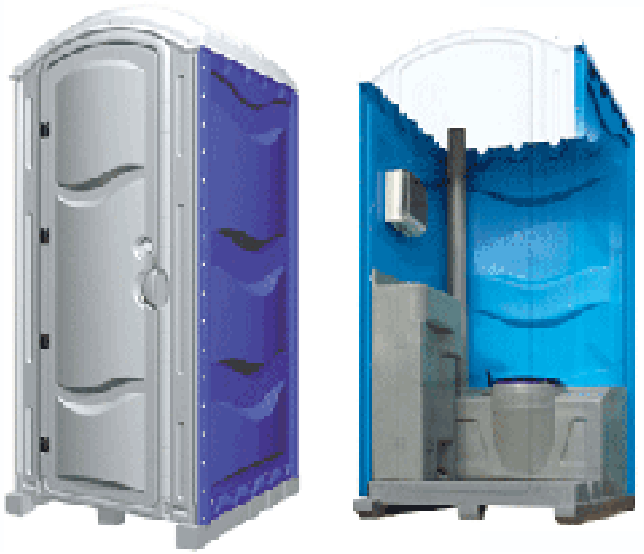
Earth Pit Privy



Chemical Toilets

Watertight, impervious pails or tanks that contain chemical solutions immediately beneath the seat or urinal

Chemicals disinfect the waste instead of simply storing it in a hole, or piping it away.



Great to rent for family events to alleviate the load on your septic

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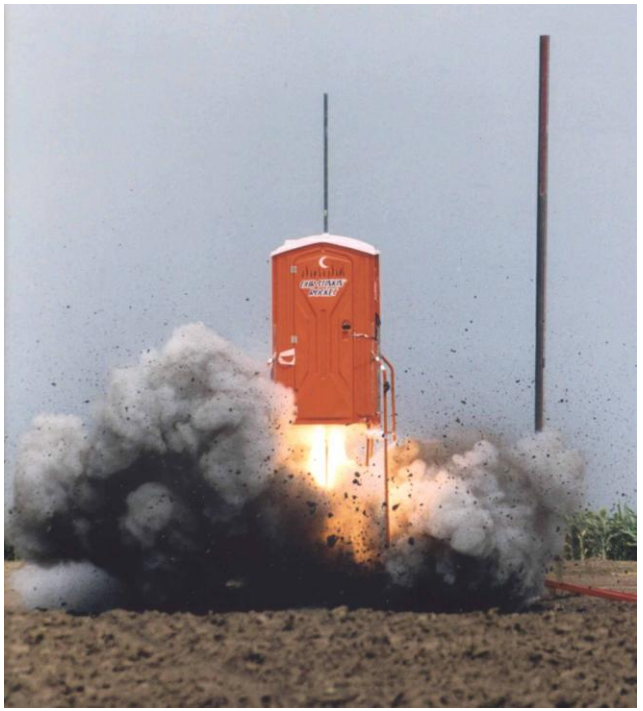
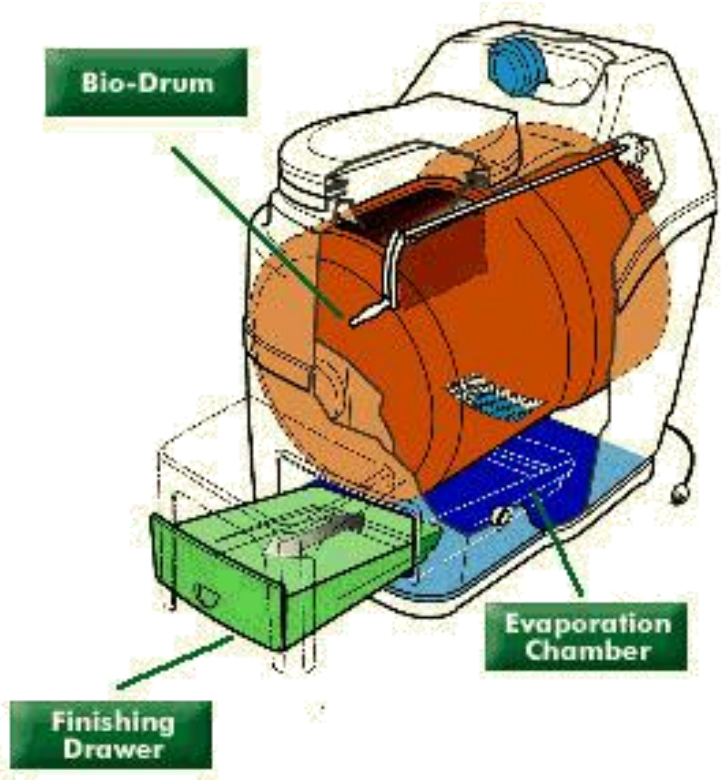
Chemical Toilets

Not recommended for Canada Day Celebrations



Composting Toilets

Designed to permit destruction of human waste by composting process but should not drain directly on the ground surface



Septic Permits

Septic system permits are required for any new installation or major repair to an existing septic system.

Repairs - replacing tank or replacing bed

Sizing Requirements

Septic systems are part of the Ontario Building Code and the system size is based on the following factors.

* **total square footage**
* **total plumbing fixtures**
* **total bedrooms**

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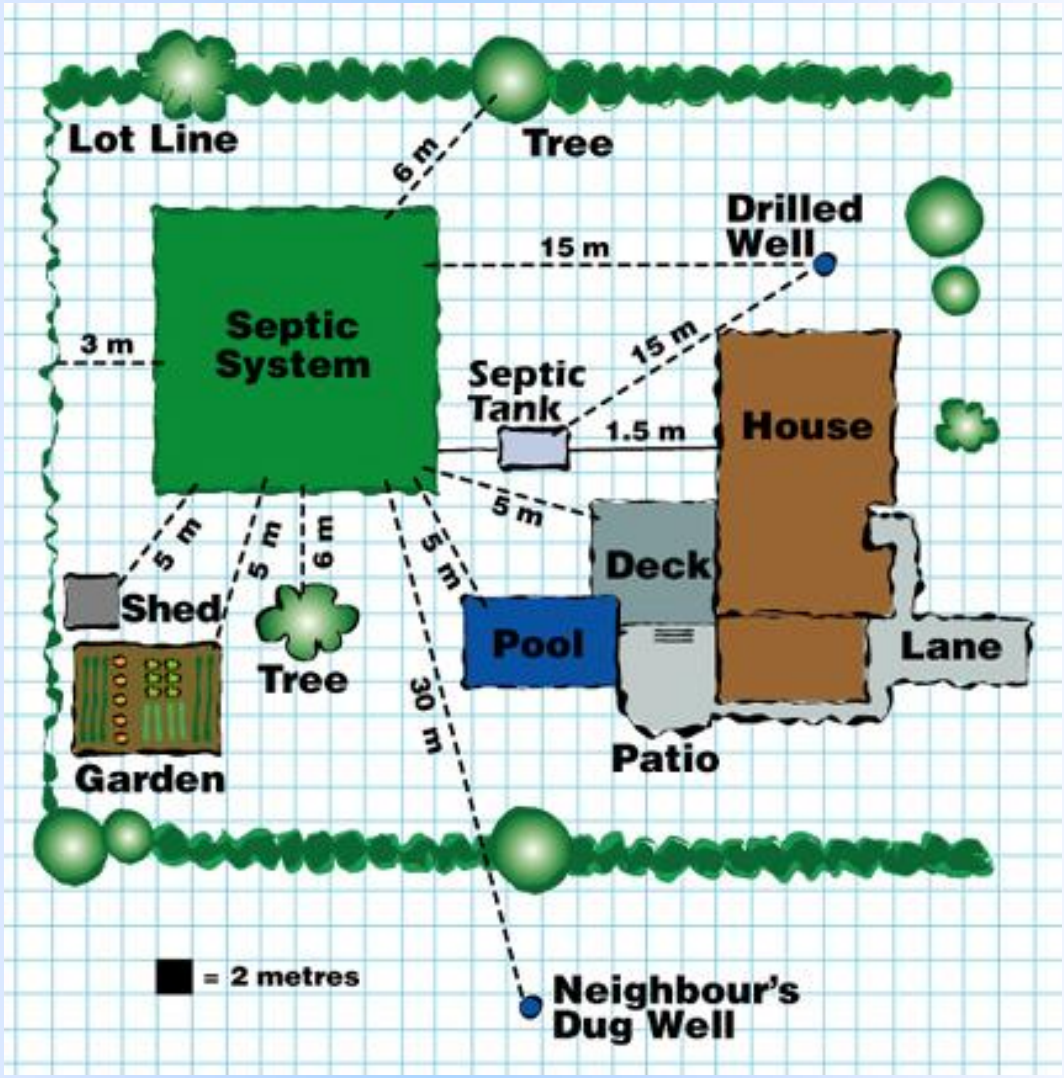
Set Backs



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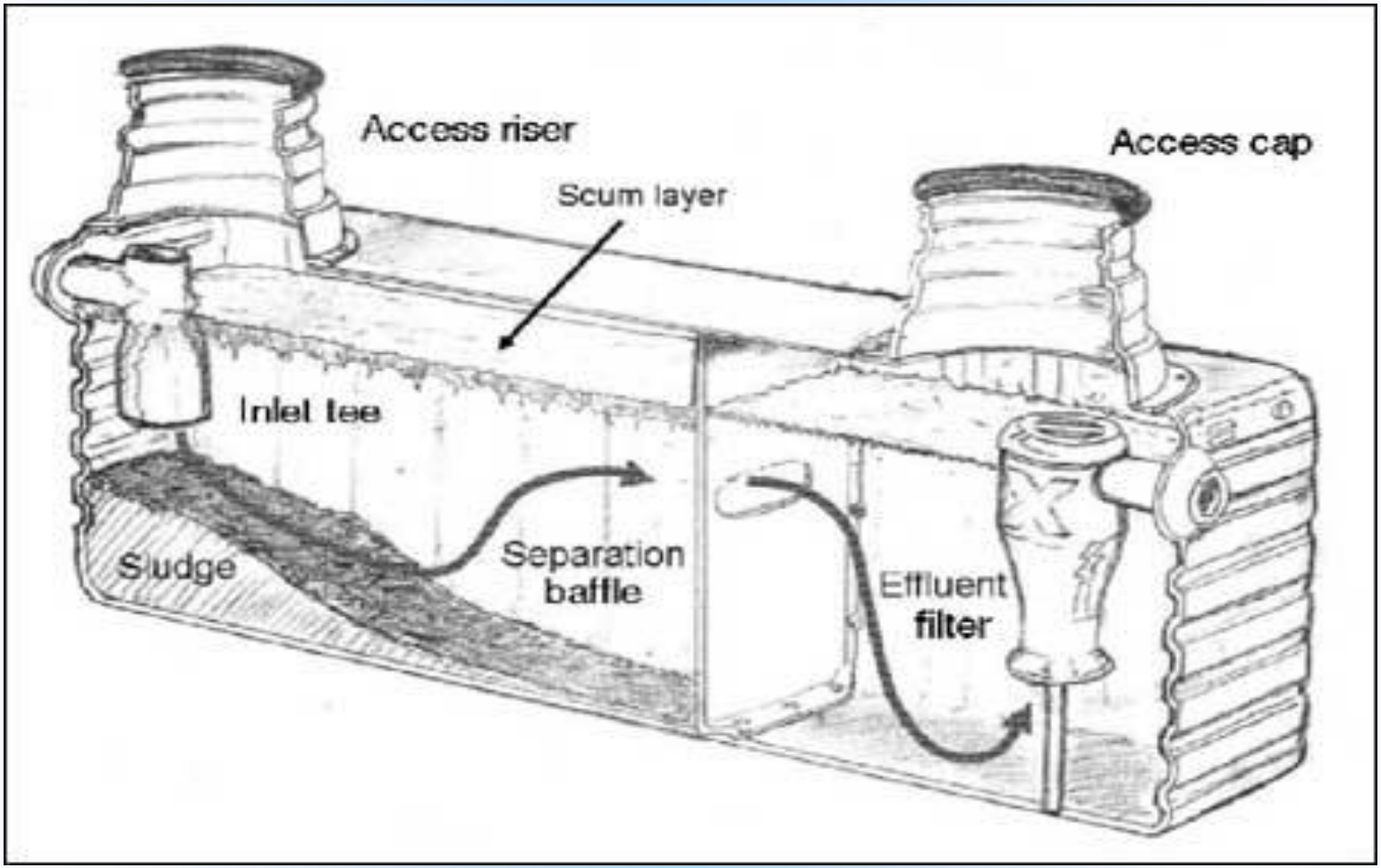
Septic Tank



Septic Tank

Functions

Separates solids from liquid

Allows friendly bacteria to decompose organic solids

Stores solids until removed by pumping

Delivers liquid to soil treatment area

Septic Tank

Never enter the septic tank

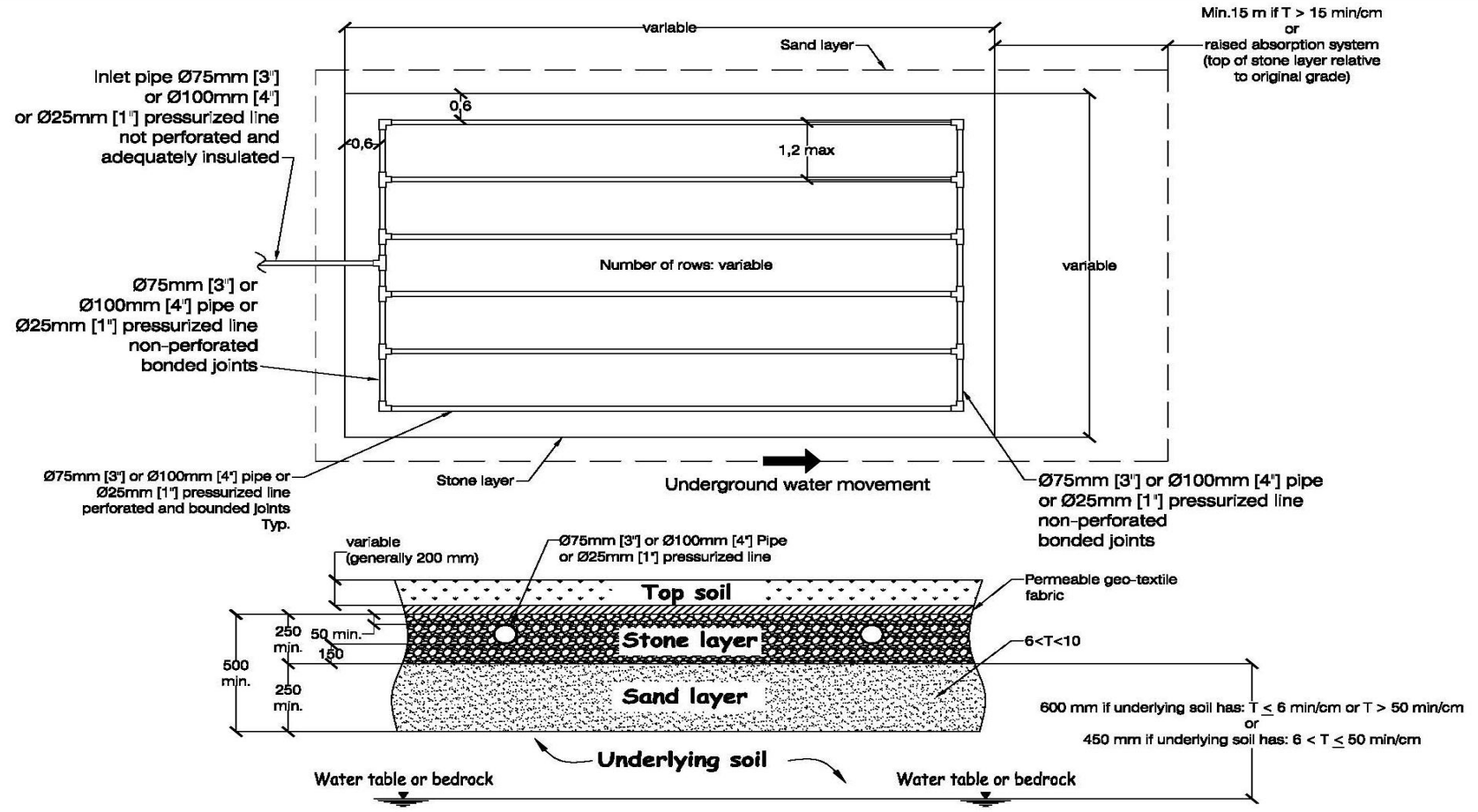
Pump solids from tank on a regular basis

Have baffles inspected at time of cleaning

Install risers to manhole access

Identify whether your tank has an effluent filter, and service as necessary

Conventional System



Septic Systems

Unabsorbed pathogens can move into the shallow groundwater and can infiltrate into deeper aquifers, discharging into lakes and streams, where the public can come into contact with disease causing organisms.

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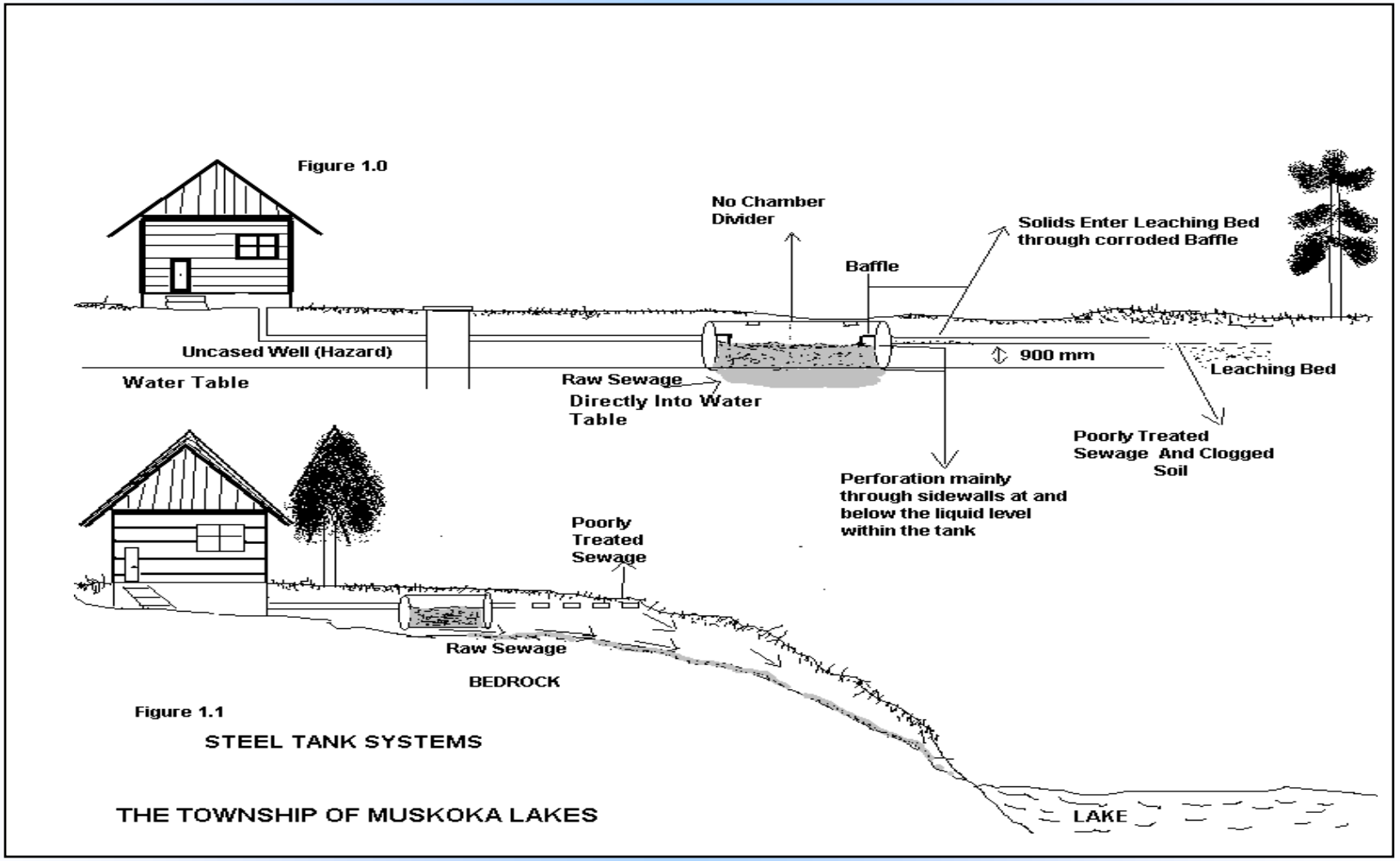
Septic Systems



Concerns

Majority are unmanaged or monitored

Owners are responsible for their systems to ensure they are working properly

If it fails it is the owners responsibility

Most inspection studies show a high percentage of failures 30 – 60%

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Concerns

What we need to replace this …..

Concerns

So we don't get this…..

Septic Do's

Know where your system is located both the tank and the area bed.
Know what is going into the system
Conserve Water
Spread out the flow use, laundry, showers, dishwashers
Divert downspouts from the system
Consider system upgrades
Install an effluent filter in the tank
Install tank risers where required

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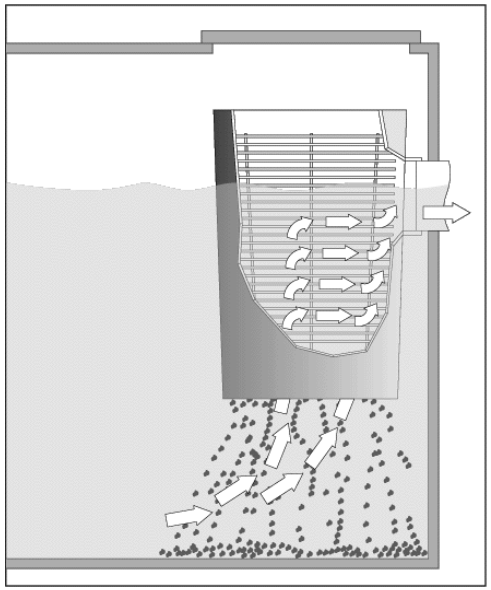
Septic Do's



Septic Do's

Pump put the tank – 2-5 years – 1/3 of solids and flush the toilet after pumping
Have the system inspected
Repair if required & obtain a permit
Hire a licensed septic contractor –ask for their BCIN #
Check the OOWA web site for contractors & information you can download
Make sure you have a copy of your permit – available at local permit office

Septic Don’ts

Don’t pour paint down your drain
Don’t use chlorine toilet pucks
Eliminate anti bacterial cleaners
Don’t use detergents with bleach
Don’t do cold water washing
Divert downspouts away from the tank & bed
No sump pumps into tank
No water softeners into tank
No decks built over the tank

Septic Don’ts

Never enter the tank
Separate grease when cooking
No Garburators - compost food waste
No parking on the bed area
No driveways over the bed area
No ice rinks over the bed area
Don’t change the use of your home/cottage without considering the impact on the septic system

Problem Indicators

Slow drains
Sewage back up
Odour in the vicinity of the area bed
Wet & soggy areas in the bed area
Striping of lawn or patchy growth
Leaking in the area bed

In Case of Failure

Call a licensed septic installer
Rope off the area from kids & pets
Systems do not self repair

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Treatment Systems

Technology to Protect and Save our Water Resources

Treatment Systems

Extended life span of area bed
Regular maintenance requirements & effluent testing.
Manufacturer's responsibility to maintain installation & ongoing service database.
Ongoing innovations and improvements
Assists in protecting our water resources
Can increase the equity of your property

Treatment Systems

Provincial Approval under the OBC – Ontario Building Code

Rigorous testing protocols required to obtain approval from NSF and BNQ.

Treats the effluent from the septic tank prior to entering the ground water

Some systems allow for more flexible designs

Options to conventional systems

Increased use across the province

Treatment Systems

Filter Based Systems	Aerobic Systems	Suspended Biomass Systems
Advantex Ecoflo – Peat Puraflo - Peat Waterloo Biofilter	Aquarobic Clearstream Nayadic Norweco Whitewater	RH20 FAST BIONEST
Stone & Pipe Replacement	Infiltrator Chambers EZFlow	EnviroSeptic Hancor Chambers

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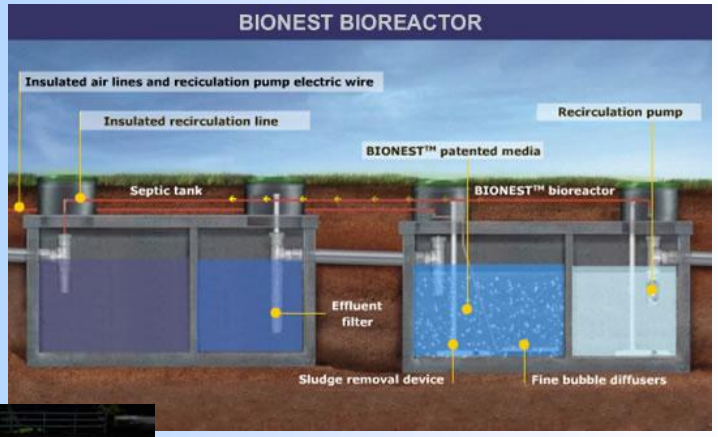
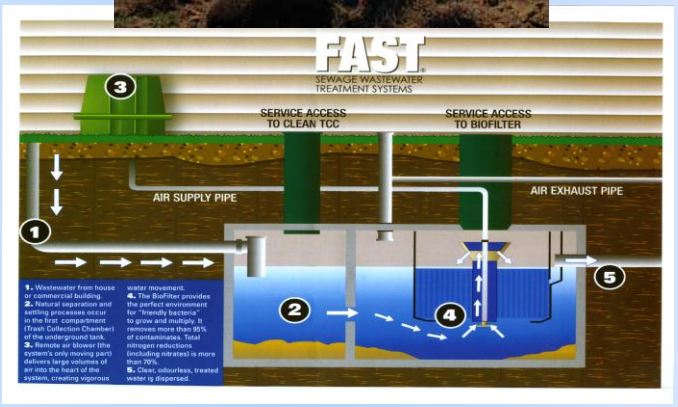
Treatment Systems





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Seminars available

Interested in having this information presented to your cottage association?

Contact info

www.oowa.org

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Thank you

Water is our most precious resource.

We can live without oil or gas

But we cannot survive without clean water