



*from
the*

Health files

Ministry of Health,
Health File #21a, Summer 2000

Maintenance and Operation of Sewage Disposal Systems

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When are sewage disposal systems used?

Any home or other building that is not connected to a municipal or city sewage system needs a method for getting rid of human wastes. Some people -- usually in rural settings or camps -- are content to use an outhouse or privy. However, all buildings with indoor plumbing need to have a sewage disposal system that is properly designed and approved by the local public health authority.

How does a septic tank/treatment plant work?

A typical sewage disposal system has two basic parts:

- A septic tank, or a package treatment plant, or an engineer-designed treatment plant, or a combination of these, and
- an appropriate disposal area - usually a series of underground pipes with holes in them, that let treated liquid from the septic tank soak into the ground below the surface. These pipes are connected to the tank by a distribution box.

Septic tank: A septic tank is a watertight, underground container for receiving, treating, and settling human wastes.

The solids settle to the bottom of the tank and become sludge, while oils and other light material float to the surface, forming a scum layer. Within the tank, anaerobic bacteria (bacteria that do not need oxygen) break down the solid wastes. When the septic tank is working properly, these bacteria can reduce the solids by 50 or 60 per cent. The liquid between the sludge on the bottom of the tank and the scum on the top flows out of the tank into the disposal area, where further breakdown occurs within the soil, until the liquid effluent is harmless and inert. The sludge and surface oils remaining in the septic tank need to be pumped out every three or five years. This can be done by a septic system pump-out contractor. If you do not maintain your sewage disposal system properly, this can result in the premature failure of your system, and you will need to pay for costly repairs or replacement of your disposal area.

Treatment Plant: A typical treatment plant uses air (oxygen) to help break down the wastes. In some cases, the wastes are treated in a septic tank first, before they flow into the treatment plant. Other treatment plants may be multi-chambered, and not need any pre-settling of solid wastes. A treatment plant is used to treat liquid wastes to a higher quality, so it is cleaner and safer before it enters the disposal area than discharge from a regular septic tank. The net result for the home owner is a smaller disposal area. However, because these treatment plants are more complex than septic tanks, with various working parts, they need more maintenance to make sure they work properly.

Can a sewage disposal system be installed anywhere?

Everyone who wants to install an on-site sewage disposal system must apply for a permit and pay an administrative fee of \$250 which includes the cost of one final inspection. (If a re-inspection is necessary, the fee is an extra \$100.)

Remember that all sewage systems must conform to the *Health Act* and the 'Sewage Regulation' and must be approved by an Environmental Health Officer, from the local health authority.

See [Health File #21b](#), which talks about sewage disposal system permits for undeveloped lots, and the rights of appeal against decisions to issue or *not* issue such permits.

Maintaining your sewage disposal system

It is important to keep an accurate drawing that shows the location of your septic tank, distribution box and disposal field. Make sure the drawing shows the system relative to a fixed point, such as your house or an outbuilding.

All access hatches should be water tight to keep surface water from getting in. Using a "Riser" over access ports will make access easier.

All advanced treatment systems (treatment plants) need ongoing, proper operation and maintenance. To make sure this is done, it is usually included as a condition of an operating permit. An owner of an advanced treatment system should contact a local service agent who has experience with your specific treatment plant and model, to set up an annual service contract.

Preventing possible problems

Sewage disposal systems can be damaged in a number of different ways, although most of these can be prevented. Sewage Disposal Systems are not pleasant to fix! So keep the following in mind:

- Do not let any vehicles (including snowmobiles) drive or park on any part of the disposal system;
- Do not flush paints, solvents or any kind of toxic chemicals down the toilet;
- Do not plant large trees or shrubs nearby because the roots may affect the disposal field;
- Do not allow roof or perimeter drains, or any surface water, to discharge on or near the sewage disposal system;
- Do not overload the system with too much water (for example by a continuously running toilet or a dripping faucet. This includes irrigating (watering) on or near the disposal area;
- Do not flush cigarette butts, filters, sanitary napkins, newspaper, disposable diapers, condoms, facial tissue (e.g. Kleenex®) , paper towels, hair, metal or metal items, coffee grounds, tea leaves, fats or grease. These can all plug a septic tank or a drain field;
- Do not install a garbage disposal without increasing the size of your tank and field;
- Use water sparingly (establish a water conservation strategy for the house);
- In areas where frost penetration is a problem, insulate the main pipe and disposal area with a generous layer of straw during winter months. Insulate the tank and pipe connection from the house as well;
- Do not leave the system inoperative for long periods during cold winter months;
- Use snow fences to promote maximum insulation from snow cover;
- If water pools up on a disposal area, seek advice from your Environmental Health Officer.

Servicing a septic tank/treatment plant

Septic tanks should be inspected every year, and they usually need servicing every two to three years (depending on the number of people using the system and the volume of daily sewage flow). Here are a few things to keep in mind:

Septic Tank

- Remove sludge in the spring rather than in the fall. This prevents leaving undigested solids in the tank during the cold winter months;
- Do not scrub a septic tank clean. A small amount of sludge should be left to renew bacterial activity;
- When it is time to service your system, check the Yellow Pages for firms equipped for this work.

Treatment Plant

- A treatment plant should only be serviced by the appropriate service agent (check with the manufacturer).

If you have any further questions about how

**sewage systems work, or about local requirements,
contact the local Environmental Health Officer
at your nearest Public Health Office.**



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On-Site Sewage Disposal System Permits For Undeveloped Lots

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Is it necessary to get a Sewage Disposal Permit for an undeveloped lot?

You are legally required to get approval from your local health authority BEFORE installing any kind of sewage disposal system (such as a septic field). These sewage disposal system permits are NOT a right of ownership. They are only granted after the site has been inspected by an Environmental Health Officer (EHO) and certain conditions have been met. The lot must have the appropriate soil and drainage characteristics that will safely support an on-site sewage disposal system, and adequate "set back" distances from property lines and water courses.

What does this mean for someone buying an empty lot?

Never assume that ANY undeveloped lot will automatically qualify for installation of a sewage disposal system. Anyone buying an undeveloped lot as a future home site is responsible for finding out if that lot will qualify for a sewage disposal permit. Always remember the rule of "buyer beware." If you make an offer to purchase a bare lot with the intention of building a house on it, you should consider including a "subject to" clause which makes successfully getting an on-site sewage disposal permit a condition of the sale. Discuss this with your realtor and/or lawyer.

Keep in mind that just because neighbouring lots may have existing sewage systems, that fact does NOT guarantee

that a new permit will be granted for YOUR lot. Standards are much stricter now than they used to be. The only way to find out if you can get a proper permit for your planned sewage system is to go through your local health authority.

How do you apply for a permit?

Only the property owner can apply for an on-site sewage disposal system permit for that property. You can get an application form from the environmental health office of your local health authority. The EHO can give you guidance on how to complete the application form. You must provide a \$250 administration fee when you submit your application form. Generally, your fee will cover the initial lot inspection and final inspection. If your system fails an inspection, you may be required to pay an additional fee of \$100 for each re-inspection. The permit -- if given -- is only valid for one year, and is not transferable. If the permit is allowed to expire, you must reapply and you will be required to pay your fees again.

Once you have filled out the application and provided all the information requested on the form, an EHO will inspect your lot to confirm the information you have provided is accurate, and the property meets the requirements of the Sewage Disposal Regulation and is suitable for a sewage disposal system. If, in the opinion of the EHO the property meets the specifications (i.e., appropriate soil depth, drainage, slope, water table, etc.) you will then be issued a permit to construct your sewage disposal system.

It is the responsibility of the applicant to provide all the necessary information, and undertake all the work needed to support the application (i.e. site plan, "perc" tests, etc.). Because different owners often have different site plans for sewage disposal systems, the specifics of each proposed system have to be judged on their own merits. It is NOT the responsibility of the local EHO to design your system for you.

Possible delays

In some cases, the EHO may postpone the required inspection/testing procedures until the winter time so that the drainage/absorption characteristics of the lot may be determined during the wetter winter months.

In other cases, particularly in the colder regions of the province, assessments cannot be made during the winter.

Prospective builders should therefore plan to have all necessary tests performed at the time of year appropriate for local weather conditions. Your EHO can advise you further.

What about the "appeal" period?

Once your construction permit has been approved, your neighbours will then have 30 days in which to appeal the granting of the permit to the Environmental Appeal Board (see Environmental Appeal Board brochure). You must post a notice of the proposed sewage disposal system in a conspicuous place on your property, including a site map clearly showing the system's exact location and extent.

The appeal process is open to anyone who feels that they might be negatively affected by your proposed sewage disposal system -- for example, if they draw their drinking water from a nearby shallow well, or are "downstream" of your sloped property.

Alternatively, anyone whose application for a sewage disposal permit is turned down also has 30 days to appeal that

decision to the Environmental Appeal Board.

How does the appeal process work?

Appeals regarding the issuance (or non-issuance) of a sewage disposal permit are heard by an independent body known as the Environmental Appeal Board. Whenever the issuance of a permit already granted is being grieved, the property owner's or lot buyer's interests will be represented by an Environmental Health Officer from the local health authority. The EHO will defend his or her decision to have granted the sewage disposal permit in the first place. Anyone interested in filing an appeal -- either regarding the issuance OR the non-issuance of a permit -- should ask at their local health authority for a brochure that explains this appeal procedure in more detail.

What else should you be aware of?

Generally, land buyers are advised to give themselves plenty of time when planning to buy an undeveloped lot. Aside from the 30-day notice-of-appeal period once a construction permit has been issued, it can take up to 60 days more before a grievance may be heard by the Environmental Appeal Board.

Important Notice:

A person who decides to proceed with the construction of a sewage system AFTER the permit has been issued but BEFORE the 30 day appeal period has passed must realize that there is a risk that the permit may be appealed, and that the Environmental Appeal Board may overrule the EHO's decision and revoke or cancel the permit.

Under these circumstances, the board has the authority to have the offending system removed. For this reason, property owners are strongly advised NOT to proceed with ANY construction on-site until the 30 day appeal period has passed and no appeals have been submitted.

NOTE: See also Health File [#21a - Operation and Maintenance of Sewage Disposal Systems](#).

If you have any further questions about obtaining sewage disposal approvals, please call your local Public Health Office.



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