



# LIFE ON THE BAY

A STEWARDSHIP GUIDE FOR  
EASTERN GEORGIAN BAY  
AND INLAND LAKES



United Nations  
Educational, Scientific and  
Cultural Organization



GEORGIAN BAY  
BIOSPHERE  
MNIDOO GAMII

# Worksheet #5 – Wastewater & Septic System

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Use this worksheet to determine whether your household wastewater is treated safely on your property.

## Why Should You Be Concerned?

- In rural areas, people use a septic tank or similar system to treat household wastewater. All the water that flows down your drains ends up in your septic system. Your septic system must be properly maintained to safely handle your wastewater and prevent contamination of ground and surface waters.
- If not properly maintained, your septic system could be a source of contamination to the environment and to your family and neighbours. Household wastewater contains disease-causing bacteria and viruses, household chemicals, and excess nutrients. All of these contaminants can cause serious health and environmental problems.
- If your home treatment system has to handle too much wastewater, it will not be as effective and may fail prematurely. Increased use of water, through additional appliances or increased number of people at the residence, will increase the load on your septic system.
- Guests from areas with municipal sewage systems might not fully appreciate the need to restrict what is flushed into the septic system and to limit the amount of water they use.
- Not only can septic system failure be highly inconvenient, it can also be very expensive. In addition, new regulations and higher standards may mean that an older system may have to be replaced instead of being repaired or upgraded.

## What Can You Do?

1. Make sure your septic system is sized to meet your needs and installed in an appropriate location on your property. Your municipality or Conservation Authority will be able to provide information on the regulations applicable to your property.
2. Look for ways to reduce unnecessary wastewater entering the septic system. Effluent from sump pumps and roof drains should not go into the septic system.
3. Keep your septic system in good condition. Pump your septic tank when the sludge layer reaches 1/3 of the tank (approximately every 4-8 years for year-round use, less frequently for seasonal use). Consult with a licensed septic tank inspector to determine when you should get your septic tank pumped.
4. Ask for a professional assessment of the condition of your septic system at each pumping. Include an inspection of the tank.
5. Avoid any aggressive groundcovers or plants with strong root systems on top of your leaching bed. Grass is usually recommended for leaching beds, or other shallow-rooted alternatives, such as microclover or white clover.
6. Consider installing innovative technologies with enhanced sewage treatments that reduce the nutrient load to the environment. These can be particularly practical on small lots with minimal soil.
7. Keep records on your septic system such as building permits and pump-out and maintenance dates. These may be useful if you sell your property.
8. Facilities such as outhouses and composting and chemical toilets can be effective, affordable, and environmentally responsible. Contact your local Health Unit or municipality to learn more.

## Wastewater & Septic System: How Do You Rate?

Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>QUANTITY OF WASTEWATER</b>					
1. <b>Efficient water use affects septic function</b>	Conservative water use (less than 180 L/40 gal. per person, per day).	Moderate water use (180-270 L/40-60 gal. per person, per day).	High water use (271-360 L/61-80 gal. per person, per day).	Very high water use (greater than 360 L/80 gal. per person, per day).	<input type="checkbox"/>
2. <b>Fixtures and maintenance</b>	Water-conserving fixtures throughout house.  Fixtures are inspected regularly.  Leaks fixed immediately.	Some water-conserving fixtures throughout house.  Some fixtures are inspected regularly.  Some leaks are fixed immediately.	No water-conserving fixtures in house.  Fixtures are not inspected regularly.  Some leaks are fixed immediately.	No water-conserving fixtures.  Leaks are not fixed immediately.	<input type="checkbox"/>
<b>QUALITY OF WASTEWATER</b>					
3. <b>Solid waste</b>	No use of garburator.	Very little use of garburator.	Moderate use of garburator.	Daily use of garburator.	<input type="checkbox"/>
4. <b>Dissolved waste</b>	Only environmentally friendly household detergents and cleaners used.	Careful use of household detergents and cleaners (0.5 L or 1 pt. per week).	Moderate use of household detergents and cleaners (1 L or 1 qt. per week).	High use of household detergents and cleaners (more than 1 L or 1 qt. per week).	<input type="checkbox"/>
	No disposal of household solvents and cleaning agents into plumbing system.	Minimal disposal of household solvents and cleaning agents into plumbing system.	Moderate disposal of household solvents and cleaning agents into plumbing system.	Frequent disposal of household solvents and cleaning agents into plumbing system.	<input type="checkbox"/>

Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>QUALITY OF WASTEWATER</b>					
5. <b>Water softener discharge</b>	Water softener does not discharge into septic tank.	Water softener discharges into septic tank but the system is properly designed to accommodate discharge water.		Water softener discharges into septic tank not designed to accommodate discharge water.	<input type="checkbox"/>
6. <b>Grease and oils</b>	No disposal of household grease or oils into septic system.	Minimal disposal of household grease or oils into septic system and oil and grease wiped from cooking utensils before washing.	Moderate disposal of household grease or oils into septic system, or no attempt to reduce disposal of grease and oil from household.	Frequent disposal of household grease or oils into septic system.	<input type="checkbox"/>
<b>WASTEWATER TREATMENT SYSTEM</b>					
7. <b>Design and construction</b>	Has building permit or certificate of approval.  System is adequately sized.  System is installed by a licensed installer.			<i>*No building permit or certificate of approval.</i>  <i>System is not sized according to regulatory requirements.</i>  <i>System is not installed by a licensed installer.</i>	<input type="checkbox"/>

*\*These conditions may violate provincial legislation or municipal bylaws.*

Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>WASTEWATER TREATMENT SYSTEM</b>					
8. Knowledge of septic system	Complete knowledge of overall septic system size, location, and operation on the property.	Some knowledge of overall septic system size, location, and operation on the property.	Limited knowledge of overall septic system size, location, and operation on the property.	No knowledge of overall septic system size, location, and operation on the property.	<input type="checkbox"/>
<b>LOCATION OF WASTEWATER SYSTEM</b>					
9. Distance from wastewater treatment system to nearest surface water	Greater than 150 m (500 ft).	61-150 m (200-500 ft).	15-60 m (50-199 ft).	<i>*Less than 15 m (50 ft) for: septic tank, leaching bed, holding tank, and/or other treatment units.</i>	<input type="checkbox"/>
10. Distance from wastewater treatment system to a well	Greater than 90 m (300 ft).	For leaching bed or holding tank: <ul style="list-style-type: none"> <li>• 24-90 m (76-300 ft) (drilled well)</li> <li>• 47-90 m (151-300 ft) (bored/dug well)</li> </ul>	For leaching bed or holding tank: <ul style="list-style-type: none"> <li>• 15-23 m (50-75 ft) (drilled well)</li> <li>• 30-46 m (100-150 ft) (bored/dug well)</li> </ul> For septic tank or other treatment unit: <ul style="list-style-type: none"> <li>• 15-23 m (50-75 ft) (drilled well)</li> <li>• 15-46 m (50-150 ft) (bored/dug well)</li> </ul>	<i>*For leaching bed or holding tank:</i> <ul style="list-style-type: none"> <li>• <i>Less than 15 m (50 ft) (drilled well)</i></li> <li>• <i>Less than 30 m (100 ft) (bored/dug well)</i></li> </ul> <i>For septic tank or other treatment unit:</i> <ul style="list-style-type: none"> <li>• <i>Less than 15 m (50 ft) (all wells)</i></li> </ul>	<input type="checkbox"/>

*\*These conditions may violate provincial legislation or municipal bylaws.*

Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>COLLECTION OF WASTEWATER</b>					
11. Source and amount	<p>All wastewater is collected for treatment.</p> <p>There is no loss of wastewater that should be treated.</p> <p>No clear water is collected and directed to the septic system.</p> <p>No clear water enters the septic system by infiltration through joints, access ports, etc.</p>		<p><i>*Some wastewater does not reach septic system because of leaks.</i></p> <p><i>Some wastewater is diverted away from the septic system.</i></p> <p><i>Clear water is getting into the septic system.</i></p>	<input type="checkbox"/>	
<b>WASTEWATER TREATMENT SYSTEM</b>					
12. Subsurface distribution of wastewater ( <i>septic or other treatment systems</i> )	Pressure or dosed distribution to leaching bed.	Gravity-fed distribution to leaching bed.	<p><i>*Drainage directly into septic field with no septic tank.</i></p> <p><i>Piped to anywhere but a septic or other approved treatment system.</i></p>	<input type="checkbox"/>	

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Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>TREATMENT SYSTEM</b>					
<b>13. Septic tank</b>	Two compartment tank.  Septic tank checked by a qualified inspector every three to four years and pumped as required.	Two compartment tank.  Septic tank checked by a qualified inspector every four to five years and pumped as required.	Single compartment tank.  Septic tank checked by a qualified inspector every six to ten years and pumped as required.	Single compartment tank.  Seldom pumped out - last time more than ten years ago.	<input type="checkbox"/>
	Good maintenance - baffles and tank checked, no leaks.	Some maintenance, no leaks.	No maintenance, but no leaks.	No maintenance, leaks from tank.	<input type="checkbox"/>
<b>14. Other treatment system</b>	Regular maintenance program followed.	Regular maintenance program followed.	Regular maintenance program not followed.	No maintenance program.	<input type="checkbox"/>
	No mechanical failures.	No mechanical failures.	Occasional failures (once every two years).	Frequent system failure.	
	Loaded at rate below design capacity.	Loaded at rate near design capacity.		System overloaded.	
<b>15. Holding tank - no leaching bed connected</b>	Capacity is higher than design requirements.	Capacity meets design requirements.	Loaded at design capacity.	<i>*Capacity does not meet recommended guidelines.</i>	<input type="checkbox"/>
	Tanks checked, no leaks.	Tanks checked, no leaks.	Tanks not checked for leaks.	<i>Leaks and overflow from tank.</i>	
	Working alarm system.	Working alarm system.	Alarm system not working.	<i>No alarm system.</i>	

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Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>TREATMENT SYSTEM</b>					
16. Leaching bed location	Located more than: <ul style="list-style-type: none"> <li>• 5 m (16.5 ft) from any building or structure</li> <li>• 3 m (10 ft) from any property line</li> </ul>	Located at: <ul style="list-style-type: none"> <li>• 5 m (16.5 ft) from any building or structure</li> <li>• 3 m (10 ft) from any property line</li> </ul>		<i>*Located less than:</i> <ul style="list-style-type: none"> <li>• 5 m (16.5 ft) from any building or structure</li> <li>• 3 m (10 ft) from any property line</li> </ul>	<input type="checkbox"/>
17. Leaching bed surface water drainage	Surface water drains away from leaching bed area.			Surface water drains onto leaching bed area.	<input type="checkbox"/>
18. Depth to water table or bedrock from trench bottom	More than 1.8 m (6 ft).	0.9-1.8 m (3-6 ft).		<i>*Less than 0.9 m (3 ft).</i>	<input type="checkbox"/>
19. Leaching bed loading (visual inspection)	Soil always firm.  No odours.	Ground is seldom wet or spongy.  No odours.	Ground is frequently wet or spongy.  Odours noticed occasionally.	Ground is always wet or spongy.  Strong odours noticed frequently.  <i>*Pooling or bubbling of wastewater noticeable on surface.</i>	<input type="checkbox"/>
<b>HAULED SEWAGE</b>					
20. Disposal of pumpage from septic tanks, other treatment systems, and holding tanks	Regulated, certified disposal by a licensed hauler.			<i>*Disposal is not done by a licensed hauler.</i>	<input type="checkbox"/>

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Topic	Best <b>4</b>	Good <b>3</b>	Fair <b>2</b>	Poor <b>1</b>	Your Rating
<b>OTHER SOURCES</b>					
<b>21. Outhouse</b>	<p>Outhouse is at least 9 m (27 ft) from a watercourse unless in a designated restricted area or a municipal by-law indicates a greater distance.</p> <p>Bottom of the pit is at least 1 m (3 ft) above the high ground-water table.</p> <p>Sides of the pit are reinforced to prevent collapse.</p> <p>Soil is placed around the base of the privy to a height of at least 15 cm above the ground level.</p> <p>The pit is surrounded on all sides and on its bottom by not less than 60 cm of solid or leaching bed fill.</p>			<p>Outhouse is located less than 9 m (27 ft) from a watercourse.</p> <p>Outhouse is within 1 m (3 ft) of the groundwater table.</p> <p>Has less than 60 cm (1.5 ft) of solid or leaching bed fill on all sides and bottom.</p>	<input data-bbox="1864 342 1938 415" type="checkbox"/>
<b>22. Outdoor showers</b>	<p>Outdoor shower drains into a grey water pit or septic system.</p>			<p>Outdoor shower does not drain into a grey water pit or septic system.</p>	<input data-bbox="1864 1109 1938 1182" type="checkbox"/>

# Helpful Hints

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## Septic System Inputs

- To keep your septic system operating at peak performance, do not let unnecessary clear water enter the system. Fix leaks promptly and install faucet aerators and low-flow shower heads to conserve water.
- Your septic tank requires live bacteria to function properly. Many substances will kill bacteria including bleach, paints, gasoline, and antifreeze. Human waste from a person on chemotherapy can also kill the bacterial action in a septic system. You may find you have to pre-pump your septic system and then pump the system after the chemotherapy treatments are completed.
- Septic systems are designed to accommodate regular household wastewater. Do not allow any of the following to enter your septic system: feminine hygiene products, diapers, condoms, plastic, and cigarette filters. Limit the amount of fats or oils, kitchen waste (coffee grounds, egg shells), and chemical cleaning products that enters your system.
- Septic system additives are widely available but should be used with extreme caution. A properly functioning septic system does not require additives, an improperly functioning system may receive more benefit from a pump out. In some cases, additives can disrupt the bacteria which the system depends on, or can cause the sludge to break into small pieces which reach the septic bed and cause clogging.

## Maintaining a Healthy Septic System

- All septic systems eventually need replacing but with proper maintenance your system can last 20 years or longer, even with year-round use.
- Do not park or drive any vehicle or any heavy equipment on the leaching bed of your septic system. Compaction will compromise the function of the leaching bed.
- All downspouts should be diverted away from the leaching bed. An average size home will deposit 11,400 l (3,000 gal) of water onto the ground after an 8 cm (3 in) rain storm.
- Signs that your system is not functioning properly include: system backing up, foul odours, effluent on the surface, soggy ground in the leaching bed, system freezing, and toilet and drains gurgling or draining slowly.
- Garburators or kitchen garbage disposal units can have a serious negative impact on your septic tank. Connecting a garburator to your septic system may be prohibited in your municipality.
- Lakes and rivers are not your bathtub. Do not use soap or shampoo, even biodegradable ones, in waterbodies. Biodegradable products degrade in the soil around your leaching bed, not in water.

# Resource List

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## Government

- Septic Systems 101  
[www.thearchipelago.on.ca/p/septics](http://www.thearchipelago.on.ca/p/septics)
- Rural Septic System Checklist  
[www.omafra.gov.on.ca/english/environment/facts/sep\\_check.htm](http://www.omafra.gov.on.ca/english/environment/facts/sep_check.htm)
- Soil Health in Ontario  
[www.omafra.gov.on.ca/english/environment/bmp/soil-health.htm](http://www.omafra.gov.on.ca/english/environment/bmp/soil-health.htm)
- Environmental Protection Agency  
[www.epa.gov/septic](http://www.epa.gov/septic)

## Stewardship & Conservation

- Septic Smart Videos & Guidebook  
[www.omafra.gov.on.ca/english/environment/facts/sep\\_smart.htm](http://www.omafra.gov.on.ca/english/environment/facts/sep_smart.htm)
- Ontario Soil and Crop Improvement Association  
[www.ontariosoilcrop.org](http://www.ontariosoilcrop.org)
- Ontario On-site Wastewater Association  
[www.oowa.org](http://www.oowa.org)
- Muskoka Water Web  
[www.muskokawaterweb.ca/water-101/water-quality/wastewater/septic-systems](http://www.muskokawaterweb.ca/water-101/water-quality/wastewater/septic-systems)
- Game of Thrones: Septic Health & Best Practices (Webinar)  
[www.youtube.com/watch?v=oa8YssAvoss&t=11s](http://www.youtube.com/watch?v=oa8YssAvoss&t=11s)
- Water Use Calculator  
[www.watercalculator.org](http://www.watercalculator.org)



# Action Plan Worksheet #5

## Wastewater & Septic Systems

Any ratings of 1 or 2 indicate where your property management needs to be changed to reduce the potential for environmental damage and water contamination. Use the information from the worksheet and the resource section to help analyze your potential problems and decide what you can do to solve or control them. Remember, this is YOUR action plan. It must suit you and your property.

Topic Number	Workshop Theme	My Rating	Short-term Action	Long-term Action
2	<i>Quantity of Wastewater</i>	2	<i>Inspect and repair all leaking water fixtures.</i>	<i>Purchase and install water-conserving fixtures</i>

# Thank You Miigwech

The Georgian Bay Mnidoo Gamii Biosphere (GBB) is a community-based organization that builds capacity for regional sustainability in eastern Georgian Bay.

The GBB is a non-profit registered Canadian charity governed by a Board of Directors.

For more information, please visit:

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