

**SEWERAGE SYSTEM REGULATION:
STANDARD PRACTICE AND
HEALTH HAZARDS**

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**HEALTH PROTECTION BRANCH
MINISTRY OF HEALTH**

Legislation and Policy:

The Sewerage System Regulation (SSR) section 9(1)(b)(v) requires that an *authorized person*¹ must file with the health authority a Provincial Health Authority Letter of Certification (LoC) certifying, among other things, that *'If operated and maintained as set out in the maintenance plan, the sewerage system will not cause or contribute to a health hazard.'*

In addition, SSR section 10(1) identifies the duties of the owner to ensure that a sewerage system is maintained in accordance with the maintenance plan.

The following guidance is intended to inform authorized persons on the scope of health hazards to consider when issuing a LoC.

Interpretation for Registered Onsite Wastewater Practitioners (ROWP):

- A sewerage system may cause or contribute to a health hazard for a variety of reasons; some, but not all of which are within the control of a ROWP.
- Examples of reasons within the control of a ROWP include, but are not limited to:
 - i. inadequate site assessment
 - ii. improper design
 - iii. improper installation
 - iv. inadequate maintenance due to:
 - inadequate maintenance plan
 - improper maintenance by the ROWP
- Examples of reasons outside the control of a ROWP include, but are not limited to:
 - i. operation that is inconsistent with the design or the operation manual
 - ii. inadequate maintenance due to failure of owner to initiate maintenance by a ROWP as prescribed in the maintenance plan
 - iii. unforeseen circumstances (such as a flood, landslide and earthquake, changes in water table from causes other than natural conditions)
- Under the *Public Health Act*, a health officer could make an order against a ROWP if the health officer reasonably believed that a health hazard existed, that a sewerage system was causing or contributing to the health hazard, and that the actions or omissions of a ROWP, including a failure to comply with the Sewerage System Regulation, were causing

¹ "**authorized person**" means a registered onsite wastewater practitioner or a professional as per section 7 of the Sewerage System Regulation.

or had caused the health hazard. Such actions or omissions could include inadequate site assessment, improper design, inadequate review of installation by a ROWP, or inadequate supervision by the ROWP of installation by the owner, but would not include the improper operation or maintenance of a sewerage system unless this was the result of a ROWP not providing a maintenance plan, or providing an inadequate maintenance plan. It could include the situation where a ROWP performs maintenance on a sewerage system, or supervises maintenance by an owner and a health officer is of the opinion that a health hazard has been caused or contributed to by improper maintenance. It would not include a situation where a health hazard was caused by circumstances that ROWP acting reasonably could not have foreseen (see examples of 3rd bullet iii – above).

The Applied Science Technologists and Technicians of BC (ASTTBC) require that ROWPs follow the Ministry of Health's Sewerage System Standard Practice Manual (SPM). The ROWP's maintenance plan for a particular system will satisfy the health hazard prevention requirements of the LoC provided the ROWP has followed the SPM and the ASTTBC ROWP Practice Guidelines <http://owrp.asttbc.org/p/documents/20151126ROWPGuidelines.pdf> in developing the plan. This also applies to the design and construction of a system - if the ROWP follows the SPM, they will be in compliance with SSR section 9(1)(b)(ii), and the sewerage system will be deemed to have been constructed in accordance with standard practice.

- A ROWP is accountable for proper sewerage system design, construction, development and provision of a maintenance plan that if followed will not cause or contribute to a health hazard.
- Improper design or construction by a ROWP becomes a practice issue governed by the oversight body (ASTTBC) which may take action including imposing penalties, conducting practice reviews, or imposing restrictions or conditions on practice in accordance with the *Applied Science Technologists and Technicians Act* and Regulations (<https://asttbc.org/wp-content/uploads/2015/10/Applied-Science-Technologists-Technicians-Act-and-Regulations.pdf>).

Interpretation for Professional Engineers, Geoscientists and Licensees:

- A sewerage system may cause or contribute to a health hazard for a variety of reasons, some, but not all of which are within the control of a Professional.
 - i. inadequate site assessment
 - ii. improper design
 - iii. improper installation
 - iv. inadequate maintenance due to:
 - inadequate maintenance plan

- improper maintenance by the Professional
- Examples of reasons outside the control of a Professional include, but are not limited to:
 - i. operation that is inconsistent with the design or the operation manual
 - ii. inadequate maintenance due to failure of owner to initiate maintenance by a Professional as prescribed in the maintenance plan
 - iii. Unforeseen circumstances (such as a flood, landslide and earthquake, changes in water table from causes other than natural conditions)
- Under the *Public Health Act* a health officer could make an order against a Professional if the health officer reasonably believed that a health hazard existed, that a sewerage system was causing or contributing to the health hazard, and that the actions or omissions of a Professional, including a failure to comply with the Sewerage System Regulation, were causing or had caused the health hazard. Such actions or omissions could include inadequate site assessment, improper design, inadequate review of installation by a Professional, inadequate supervision by the Professional of installation by the owner or a ROWP, but would not include the improper operation or maintenance of a sewerage system unless this was the result of a Professional not providing a maintenance plan, or providing an inadequate maintenance plan. It could include the situation where a Professional performs maintenance on a sewerage system, provides field review of maintenance, or supervises maintenance by an owner or a ROWP, and a health officer is of the opinion that a health hazard has been caused or contributed to by improper maintenance. It would not include a situation where a health hazard was caused by circumstances that a Professional acting reasonably could not have foreseen (see examples of 3rd bullet iii – above).
- The Professional’s maintenance plan for a particular system will satisfy the health hazard prevention requirements of the LoC for that system, so long as the Professional, in developing the plan, has followed standard practice as identified in the SSR and with consideration of the Association of Professional Engineers and Geoscientists of BC (APEGBC) Professional Practice Guidelines – Onsite Sewerage Systems (<https://www.apeg.bc.ca/getmedia/d8e46da1-fd0d-4c69-9b5b-2d546c72115d/APEGBC-Guidelines-for-Onsite-Sewerage-Systems.pdf.aspx>).
- As per the APEGBC Professional Practice Guidelines for Onsite Sewerage Systems, a Professional may consider other sources of standard practice, with the appropriate scientifically defensible rationale. This also applies to the design and construction of a system - if the Professional follows standard practice, they will be in compliance with SSR section 9(1)(b)(ii) and the sewerage system will be deemed to have been constructed in accordance with standard practice.

- A Professional is accountable for proper sewerage system design, construction, development and provision of a maintenance plan that if followed will not cause or contribute to a health hazard.
- Improper design or construction by a Professional becomes a practice issue governed by the oversight body (APEGBC) which may take action including imposing penalties, conducting practice reviews, or imposing restrictions or conditions on practice in accordance with the *Engineers and Geoscientists Act* and Bylaws (<https://www.apeg.bc.ca/About-Us/Governance/The-Act,-Bylaws-and-Code-of-Ethics>)