ASTTBC TECHNOLOGY PROFESSIONALS

Registered Onsite Wastewater Practitioner (ROWP)

Practice Guidelines

May 1, 2026

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ROWP Practice Guidelines
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1.0 Purpose

The purpose of the Registered Onsite Wastewater Practitioner (ROWP) Practice Guideline is to provide pertinent information that is not readily available in other regulatory documents such as:

1. Ministry of Health Sewerage System Regulations (SSR),
2. Standard Practice Manual (SPM),
3. Professional Governance Act and ASTT Regulations,
4. ASTTBC Bylaws and Practice Guidelines
5. ASTTBC Standards of Competence and Code of Ethics

2.0 Regulatory Framework

2.1 British Columbia Government Acts and Regulations

The SSR and SPM provide the regulatory framework for onsite wastewater. ASTTBC Bylaws specify the registration requirements and criteria for individuals to be registered as Authorized Persons (AP) in British Columbia within the limits specified in the Sewage System Regulation (SSR).

2.2 Standard Practice Manual (SPM)

The SSR establishes the SPM as a source of standard practice but also anticipates that other sources may be used. The inherent versatility in the regulation is required to support advanced design approaches such as custom design, performance-based design or innovative design by Professionals. A SSR Professional may do a custom design or other deviation from the SPM. A ROWP Authorized Person (AP) must adhere to the SPM.

2.3 Authorized Persons

The SSR requires that sewerage system design, construction and maintenance only be undertaken by or under the supervision of Authorized Persons (AP). An Authorized Person is a person registered with the Applied Science Technologists and Technicians of BC (ASTTBC) as a Registered Onsite Wastewater Practitioner (ROWP) or an individual registered with the Association of Professional Engineers and Geoscientists of BC (APEGBC).

2.4 Adherence to the SPM

2.4.1 ROWPs must follow the BC Sewerage System Standard Practice Manual (SPM). In the event of a discrepancy between this Practice Guideline and the SPM, the SPM shall govern. Where deviations from SPM non-critical standards (SPM Volume III Guidelines) are made, these must be clearly identified and explained within the design rationale and only under circumstances where full compliance with the SPM is not possible. Where deviations from critical standards (SPM Volume II Standards) are necessary, the ROWP must seek guidance and documented support from a SSR Professional or refer the project to a SSR Professional.

2.4.2 Deviating from the SPM standards for planning, installing and maintaining onsite wastewater systems will increase ROWP exposure to liability. Non-compliance with the SPM is a key consideration in ASTTBC Practice and Compliance, disciplinary or other practice review process.

2.5 Federal Jurisdiction and First Nations Land

The SSR may not be applicable for lands under federal jurisdiction within BC. On First Nations Lands, the policy of Aboriginal Affairs and Northern Development Canada and the First Nations Health Authority is that onsite sewerage systems are to be constructed following SPM standards. The First Nations Health Authority (FNHA) oversees Onsite systems on First Nation Lands and ROWPs must consult the Environmental Health Officer at the local FNHA office to determine if any local requirements also apply. Refer to http://www.fnha.ca/

2.6 Health Authorities and Environmental Health Officers (EHO)

Off Native Lands, Health Authorities and Environmental Health officers (EHOs) have statutory authority under the Health Authorities Act to:

a) Administer and enforce the SSR.
b) Carry out legal remedies such as orders or tickets.
c) Accept sewerage system filing documents and letters of certification documents for systems and confirm that these meet the documentation standards of the SSR.
d) Confirm that only Authorized Persons plan, construct or maintain installed onsite systems (or supervise same).
e) Inspect and take corrective action to alleviate health hazards related to an onsite sewerage system.
f) Receive and respond to complaints about health hazards.

2.7 Reporting Health Hazards

ROWPs shall protect the public interest at all times acting in a diligent manner to alleviate any potential health hazard and informing owners of their regulatory obligations to prevent health hazards. Suspected health hazards must be reported to the local Health Authority. The Ministry of Health has produced a Health Hazard Communication Guideline that describes procedures for Health Authorities, including additional examples of circumstances that may pose a health hazard. Refer to:
http://www.health.gov.bc.ca/protect/pdf/health-hazard-communication-guideline.pdf

2.8 Other Regulations

The SPM includes an extensive listing of other applicable regulations, policies and bylaws. The other regulations include the Industrial Camps Regulation, Riparian Area Regulation, Public Health Act, and the Drinking Water Protection Regulation. The Health Authority policies apply regarding subdivision of land, local bylaws and zoning, and restrictive covenants. Older systems installed prior to the SSR are described in the Sewage Disposal Regulation. ROWP Private Inspectors need to be familiar with the Sewage Disposal Regulation and other historical Acts, Regulations or Bylaws applicable to the system being inspected or assessed.

3.0 ROWP Practice in Onsite Sewerage

3.1 Ethical Business Practices

All ASTTBC registrants including ROWPs shall comply with the ASTTBC Bylaws including Standards of Competence and Code of Ethics. Standards of Competence describe the principles of ethical conduct that ASTTBC registrants apply in their practice in order to provide duty of care to the public, the profession and their fellow registrants.

3.2 Insurance

To protect their clients, ROWPs should carry appropriate insurance for the different types of work they are registered for. While an Installer is best served by Construction General Liability (CGL), a Planner, Maintenance Provider and Private Inspector would need Error & Omission (E & O) coverage in addition to CGL.

In the event that the ROWP does not have insurance appropriate for their category of registration, full disclosure must be made to the client. This disclosure must be made in writing to the client and be contained within any estimate, quote or proposal to the client prior to the client accepting the ROWPs proposal. The ROWP is to obtain a signed and dated acknowledgement from the client, confirming that they have been so informed and wish to proceed.

3.3 Contracts with Clients

ROWPs are strongly advised to have a written contract with every client clearly describing the scope of work, estimated dates for key deliverables, financial consideration, limitations and exclusions. ROWPs should not undertake a contract for anything other than a firm price, and be cautious of contracts containing contingency fee clauses. ROWPs should not submit any proposal to secure an engagement or assignment with a firm price or estimated cost lower than the realistic expected full estimated cost of the proposed engagement.

3.4 Oversight of Non-Authorized Persons

Oversight of non-authorized persons (including non-ROWP staff, sub-contractors or homeowners) a ROWP must be in charge and take full responsibility for actions taken by the non-authorized persons engaged in wastewater activity or tasks to ensure that they perform their work in accordance with the SPM. Oversight requires that the supervising ROWP must be made available to the non-authorized person(s) and review their work for adherence to code and standards while the work is being performed. Continuous onsite supervision of a non-authorized person(s) by the supervising ROWP is not mandatory.

Planners are responsible for providing details, specifications, and interpretation of their design to aid an Installer through the construction work. An AP Planner cannot provide supervision or direction for the installation of a system by a non-AP unless the AP Planner is certified and registered as a ROWP Installer.

In order to certify the construction meets the intended design, the Planner must undertake construction reviews at key points through the construction process, and set these requirements within the design specifications in order that any Installer contracted to construct the system contacts the Planner on record prior to commencing the work, ensures they understand the design as set out by the Planner, and contacts the Planner at key stages or benchmarks during construction to ensure the work is substantially compliant with the Planner's design. Planners are to conduct system commissioning and testing before completing a Letter of Certification (LoC) for the system. The AP Planner should require the Installer to provide a written declaration that all aspects of the system were constructed substantially in the manner specified by the Planner and consistent with the SPM.

3.5 Project Files

ROWPs must retain a hard copy or digital file containing all documentation associated to a project. If a ROWP becomes involved in a legal action, an investigation by the ASTTBC

Investigations Committee or undergoes a Practice Assessment, and supporting documents for a project are not available, it will be very difficult for the practitioner to defend their actions.

Photographic evidence must be included in the practitioner's files. Photographs should be taken at key stages of the work. They should be taken in a manner that provides credible evidence to confirm compliance with critical standards and standard practice. Conclusions reached during maintenance service or private inspections should be supported by photographic evidence. Photographs showing soil conditions, test pits, and key performance boundaries such as horizontal setbacks and vertical separation should support site and soil evaluations.

3.6 Reporting Hazards and Unprofessional Conduct

ROWPs are expected to report issues that might affect the public interest, to such groups as the Provincial Emergency Program, the Ministry of Environment, and the local Health Authority. For onsite wastewater practice, identification and reporting of potential health hazards to the Health Authority is a key requirement. For example, any breakout of effluent to surface generally constitutes a potential health hazard and must be reported.

Concerns regarding the actions of ROWPs are to be reported to the ASTTBC Registrar. Concerns regarding a P.Eng. or a P.Geo. should be reported to APEGBC.

The role of regional Health Authorities, ASTTBC, and APEGBC regarding health hazards is described in the Ministry of Health publication *Health Hazard Communication Guideline* at http://www.health.gov.bc.ca/protect/pdf/health-hazard-communication-guideline.pdf

3.7 Adequate Knowledge and Honest Conviction

Statements regarding the condition or operation of existing systems must be supported by exposure and testing of components according to ASTTBC Inspection Guidelines as a minimum standard. Conclusions regarding site capability, system selection or system design must be supported by site and soil assessment, typically including excavation of test pits and soil permeability testing. This applies to estimates, preliminary proposals and quotations.

3.8 ASTTBC Seal Guidelines

The stamp can be used only by an ASTTBC – ROWP in good standing. The privilege of using the stamp can be removed if not used in a proper and ethical manner.

3.8.1 Ownership of Seal: The seal remains the property of ASTTBC and must be returned promptly at the request of the Registrar of ASTTBC.

3.8.2 Application of Seal: The seal must be applied in a clear and legible manner. The seal must be used on any preliminary, draft or final documents that have been prepared by the Practitioner or prepared under the immediate supervision of the Practitioner. The normal signature of the Practitioner must be clearly shown in the space provided. The use of initials without surname is not allowed. The date the seal is used must be noted.

3.8.3 Documents Requiring Stamp

a) Transfer technical information; or
b) Have a technical impact on a third party; or

c) Have been specifically requested by a client or an authority having jurisdiction.

The seal will be used for Filings, drawings and reports. The ROWP shall apply the seal for work done only in the specialty endorsements in which registration has been granted by ASTTBC.

a) Planners are to provide to the client and the Health Authority with Filing and Certification documents that have been stamped, signed and dated, that certify the system was planned in a manner consistent with standard practice and constructed in accordance with the plans and specifications filed with the Health Authority.
b) Installers are to provide the Authorized Person who planned the system with a stamped, signed and dated Installer Letter of Certification which certifies that the system was installed in accordance with standard practice for installation and with the plans and specifications provided, and any written instructions received from the Authorized Person subsequent to the original accepted Filing.
c) Maintenance Providers are to provide the client, and the Authorized Person who planned the system (if requested under the Operation & Maintenance Plan) with a sealed, signed and dated written maintenance service report describing the work undertaken, the reasons for doing the work, recommended date for the next maintenance & monitoring visit, and the overall performance and operation of the system.
d) Private Inspectors are to provide a stamped, signed and dated report to the client that meets the requirements of the ROWP Practice Guidelines for Providing Inspection Service.

3.8.4 Responsibility The onus is always on the Practitioner to ensure that his/her application of the stamp is done in a legal, ethical and appropriate manner. It is the responsibility of the Practitioner to be aware of any legal or employer limitations or requirements on the use of the stamp. The Association will assist by providing general guidelines as necessary.

3.9 Quality Standards for Documents

Documents describing the design, installation, and maintenance of sewage systems shall include information that could be understood and used by various people potentially involved in some aspect of the sewage system. A full set of documents is required to support decisions made and actions taken from start to finish of a project. Some of the essential documents for a ROWP to rely on include the initial site assessment, soil assessments, signed statement of intended usage, the rationale for choice of system, the record of design, comprehensive construction specifications, and a maintenance plan. Reports intended for homeowners or other clients should explain the relevant points in such a way that a person with little knowledge of onsite wastewater systems understands what kind of system has been installed, why that system was selected, where the components are located, the importance of periodic maintenance, and the purpose of any risers to provide access to key system components.

3.10 Remaining Current with Regulation Changes

ROWPs are expected to keep current with Ministry of Health communication bulletins and policy statements related to the Sewerage System Regulation (SSR) and the Standard Practice Manual (SPM).

4.0 Planner (PL)

4.1 Limitations of ROWP Planners

When planning an onsite wastewater system, the ROWP Planner is to obtain a signed Owner's Declaration describing the anticipated usage of the house or property and confirm the declaration against the design and features of an existing home/building or proposed plans for new homes/buildings. ROWP Planners must gain reasonable assurance that the sewage quantities and qualities for a proposed system are within the allowable limits as specified in the SPM for a ROWP. Where a ROWP has reasonable evidence to confirm or believe that the wastewater quality does not or will not meet typical residential sewage quality as indicated by the SPM, the project should be referred to a Qualified Professional (QP).

4.2 Parameters for Residential Sewage

In some cases, sampling and lab analysis of existing sewage flows will be required. If existing or anticipated sewage falls outside the SPM parameters for residential sewage, the SPM standards for system sizing and configuration are generally not applicable. Commercial facilities may discharge sewage that falls outside the residential sewage parameters or wastewater with strength and flow characteristics equivalent to residential sewerage. Examples include restaurants, food processing services, bakeries, wineries, hair salons, car washes, laundromats, RV sewage services and sani-dumps.

4.3 ROWP Planner Construction Review Responsibility

When the ROWP Planner is the Authorized Person (AP) and is not the installer, the AP must provide adequate construction review to be confident and satisfied that the system was installed substantially as planned. To be confident that the construction review is adequate the Planner should attend the site at a minimum of three key stages:

a) At a pre-construction meeting, where plans and specifications are reviewed, proposed locations of components are confirmed, and construction techniques are discussed to ensure the system will be constructed substantially as planned.
b) During construction typically before final backfill of tanks, before cover soil is placed on the dispersal system.
c) At system completion, testing and commissioning.

4.4 Letter of Certification

Within 30 days of construction completion, the AP that filed the Record of Sewerage System (RSS) must submit a letter of certification (LoC), record drawing and maintenance plan to the Health Authority. A copy of the LoC, Maintenance Plan and record drawing shall be provided to the owner.

Where the AP who planned and filed the RSS is unable to submit the LoC, another ROWP Planner may do so under limited circumstances. In such cases, the ROWP submitting the LoC assumes full professional responsibility and liability for the system, including its design, installation, and maintenance plan. The ROWP assuming this responsibility must independently verify that the design calculations are accurate and that the installation and commissioning conform to the SPM and these Guideline minimum requirements.

When the Installer is not the AP that planned and filed the system, the Installer shall provide the AP a signed declaration that the system was constructed substantially as per the specifications and plans provided by the AP and in compliance with standard practice for installation. The Installer's ROWP stamp must be affixed. The AP shall keep the stamped and signed original declaration on file.

4.5 Assessing Properties for Subdivision Applications

Assessing properties for subdivision applications differs significantly from routine planning services provided by ROWP Planners as descried in the SSR and SPM. Planning for subdivision of properties is not limited to determining which system type and configuration will meet SPM standards. Requirements for subdivisions are complex with multiple authorities each with their respective regulations.

Planners may provide services to support a client's application for subdivision approval. The subdivision-approving officer (person with jurisdictional authority for approval of subdivisions) typically refers the subdivision application to the local Health Authority for an opinion regarding suitability of the site for onsite wastewater dispersal. Health Authorities generally require a site/soil assessment by an AP as a condition of their recommendation.

Health Authority requirements are generally based on historic soil depth and area requirements for gravity dispersal. The requirements are not aligned with current SPM standards. The Planner must conduct the site/soil assessment in a manner that provides adequate information to support conclusions about both the Health Authority guidelines and the SPM standards. The Planner's report must indicate whether conditions on each proposed lot meet the requirements of the local Health Authority subdivision guidelines and must indicate which system type and configuration is required for full compliance with the SSR and the SPM.

Regardless of any specific direction from the Health Authority, the AP must determine and report whether each individual lot within a proposed subdivision plan has conditions that will allow at least two dispersal systems. For an undeveloped parcel, a primary and reserve dispersal area must be identified. For a parcel with one or more existing structures and sewerage systems, a reserve area must be identified, and each existing sewerage system (if intended for continued usage) must be inspected to confirm adequate performance, condition, size, and location.

4.6 Grey Water, Privies and Composting Toilets

The SPM does not include information that aids the Planner with grey water systems, reuse and recovery. Certain aspects of grey water reuse and recovery may be covered in the Composting Toilet Guideline being developed by the Ministry of Health.

Privies were permitted under the former Sewage Disposal Regulation (in effect until May 31, 2005), and a number remain in operation. Privies permitted under the former regulation must be upgraded, repaired or replaced when they no longer function, if they are potentially creating a health hazard or as required by a Health Officer.

Pit privies are not allowed under the SSR. However, the Health Authority may permit vault privies as a holding tank. Also, pit privies may receive Health Authority approval for use within temporary work camps (as per the Industrial Camps Regulation for non-permanent camps of less than one year). ROWPs must ensure compliance with all regulations applicable to privies and any direction from a Health Officer.

5.0 Installer (IN)

5.1 Obligations to Ensure Compliance

Installers must ensure systems are constructed in compliance with the SSR, including the horizontal separation requirements between system components and any well. Installers must construct systems in accordance with standard practice for installation. ASTTBC requires Installers to follow the SPM standards and guidelines for installation. Installers share with the Authorized Person (AP) the obligations to construct systems in accordance with the SPM.

Before starting construction, ROWP Installers must have a complete copy of the plans and specifications prepared by the AP on record, including a copy of the Health Authority Record of Sewerage System (RSS) form clearly showing the 'accepted' stamp affixed by the Regional Health Authority office. Installers must notify the AP on record before construction begins and must provide reasonable opportunity for the AP to review the plans with the Installer.

The Installer must be familiar with, and construct in accordance with the plans, specifications and any other instructions provided by the AP on record. During construction, Installers must confirm that critical standards for vertical separation and horizontal separation distances are met by the system as constructed. The Installer must report in writing to the AP on record any site or soil condition that prevents installation in accordance with plans, specifications or the SPM.

5.2 Documenting Construction

Installers must record, and retain on file, a log of construction that includes the starting date, key stages of construction and completion. Installers should create and retain photographs showing the site before, during and after construction as evidence of compliance with standard practice. Clear photographs with notation of the date, description and other information proving the construction was substantially in accordance with plans, specifications, and filing provided by the AP on record.

When an Installer is not the AP on record they must provide the AP on record a signed declaration that the system was constructed substantially as per the specifications and plans provided by the AP and in compliance with standard practice for installation. The ROWP stamp issued to the installer must be affixed to the written declaration. The AP that filed the Record of Sewerage System (RSS) shall, within 30 days of completion of construction of the system prepare and submit a Letter of Certification (LoC) as described in section 4.4.

6.0 Maintenance Provider (MP)

The maintenance plan included as an attachment to the Letter of Certification is a regulatory requirement for the owner and a practice requirement for the Maintenance Provider. Any ROWP who undertakes maintenance and monitoring, or provides any assessment or confirmation of performance or functionality of an existing sewage system for a property owner prior to commencing an on-going preventative maintenance program, shall be certified and registered with the MP endorsement. Maintenance Providers must perform the maintenance and monitoring procedures specified in the maintenance plan as a minimum, and include a performance evaluation of the entire system, not simply one component or portion of the system. Maintenance must not be limited to assessment and maintenance of only the treatment hardware, except when such maintenance is prescribed by the maintenance plan, and/or when additional maintenance of the remainder of the system is scheduled and completed in a timely manner. The maintenance plan/maintenance frequencies may be

reviewed and amended after a specified period of system operation. At that time, the maintenance provider may establish a revised maintenance frequency and file an amendment to the maintenance plan (with or without the input of the planner) if he or she has the suitable level of competency to do so.

6.1 Compliance with Standard Practice Manual (SPM)

The ASTTBC requires Maintenance Providers to follow the SPM standards and guidelines for maintenance practices. Maintenance Providers must provide the owner or client with a written report of maintenance performed or required after each maintenance visit is completed.

7.0 Private Inspector (PI)

7.1 Regulatory Framework for Private Inspectors

The SSR and the SPM do not stipulate that individuals providing onsite wastewater inspection services are to be certified or registered as Authorized Persons (AP). ASTTBC considers conducting accurate inspections and providing quality reports and other information on the condition of onsite wastewater systems of paramount importance. Any ROWP that provides inspection services, provides any assessment or confirmation of the performance or functionality of an existing onsite sewage system other than for the purposes of maintenance, shall be registered and endorsed as a Planner (PL), or Maintenance Provider (MP), or a Private Inspector (PI).

All ROWP registrants providing inspection services must follow Procedural Guidelines for Private Inspectors as detailed in section 7.4 of this guide.

The ROWP is to offer an inspection tailored to the needs of the client while meeting the minimum inspection standards for either inspection type. The ROWP must ensure that an appropriate level of inspection and reporting is conducted to determine and explain both the findings as well as provide adequate information to defend and document conclusions. Any ROWP PI who undertakes an inspection must have the educational qualifications, equipment, competencies and experience to do thorough inspections.

There are two types of inspection: 1) Performance inspections; and 2) Compliance inspections.

7.2 Performance Inspection

A Performance Inspection is intended to assist a prospective buyer with determining the condition of the onsite sewage system, suitability for the buyer's intended use or changes to the home or property, recommended or required maintenance, repairs or improvements with reasons for them, time frame for undertaking repairs and maintenance, information on who can undertake the work and how they can be contacted or located. This inspection can also be carried out on behalf of a property owner prior or during the listing of their property for sale as an aid for prospective buyers. May also be appropriate where a property owner wishes to understand the system and its performance for their own knowledge.

A Performance Inspection is to determine or include the following:

a) System types 1, 2 or 3
b) Explain the expected function as well as the actual function and condition of each component
c) General location of each component on the property

d) Location of any utilities in the vicinity of the onsite system
e) Review of all existing permit/Filing documents and comparison with the system as installed
f) Review of all existing maintenance records
g) Review written where possible current or expected usage information collected from the occupant/client against the designed abilities of the onsite system
h) Completion of a detailed report to the client on the condition, performance, and suitability for intended use and recommended or required repairs, maintenance or improvements to the system

7.3 Compliance Inspection

A Compliance Inspection is intended to assist a property owner when making changes to the home or property subject to bylaw requirements for the change in use or additional structures being permitted. A Compliance Inspection includes all aspects of a Performance Inspection plus the following requirements:

a) Detailed and precise recording of location and sizing of system components
b) Comparison of the system as installed against the intended change within the building (additional bedrooms, floor space, occupants, etc.) or to the property (proposed swimming pool, workshop, landscaping or other structures or work) that may negatively impact the existing onsite sewage system
c) Effort is to be made to collect and review all relevant supplementary documentation which may include the electrical permit, site survey/plans, and restrictive covenant, right-of-way, or other limiting condition information
d) Submission of any reporting or approval form as required by a regional district or municipal bylaw prior to the issuance of a building permit or similar document
e) A ROWP is to ensure that no report, statement or assurance of compliance letter is issued which cannot be substantiated by the information gathered during the inspection.
f) A ROWP must expect that any report, statement, or assurance of compliance letter may be read by a third-party and that such a document may be relied upon to make material decisions unless the document specifies otherwise.
g) A ROWP is not to certify, or otherwise make legal, a system that was not planned and installed under a valid permit or Filing.

7.4 Procedural Guidelines for Private Inspectors

ASTTBC has developed a procedural guide for ROWP Private Inspectors (see 8.0 Annex 1) as a supplement to the SSR and the SPM.

8.0 Annex 1 – Guidelines for Providing Inspection Service

8.1 Preparation

The ROWP is to inform the property owner/manager of the access needed and all physical actions required for inspection, such as digging to expose a component. Their permission, preferably in writing, is required before commencing the inspection. The ROWP is to comply with all requirements or procedures as set out by the property owner/manager while on the property inspecting an onsite system.

The ROWP is to inform, and take steps to protect, all parties on the property from the physical, biological, and chemical hazards, which may be created temporarily in the area of the onsite system during inspection.

The ROWP is to fully disclose any potential conflict of interest to the client when such a situation may arise. This may result if the ROWP or their employer was previously involved in any manner with the onsite system. Written permission is to be received from the client before commencing the inspection.

8.2 To Locate, Expose and Test

8.2.1 ROWPs are to consider utility location and component materials when locating and exposing to prevent damage. All components are to be exposed in a manner that prevents unnecessary disturbance to the property and must be replaced so as to return the site as closely as possible to its original condition. Components are to be exposed by hand only, unless burial depth is confirmed as beyond 60cm or if there are large obstructions such as boulders or sloughing soils. In such cases, the ROWP may limit the inspection, or may arrange for the use of a machine through, and with the approval of, the property owner. The owner is to be provided with a full explanation of the risks associated to this action. To prevent damage, the ROWP may specify the type and size of equipment and should be on site to supervise any digging.

If components are located under structures, driveways or extensive landscaping, the ROWP may limit the inspection, or arrange through the property owner for the restriction to be cleared. The ROWP is not expected or required to dismantle structures or permanent features.

8.2.2 Where a feature of the system or the property poses a hazard to the inspector or may break if tested or examined due to its condition, or if a full inspection is prevented, the ROWP is not required to proceed with the inspection. The ROWP is to fully inform the client of the limitation in writing.

8.2.3 The ROWP is to use appropriate equipment for locating and testing components and diagnosing problems. Pipe and tank cameras, electronic utility locating equipment, and hand-held photographic equipment, along with shovels, lifting hooks, probing and measuring tools as the minimum expected and additional equipment specific to a system may be required.

8.2.4 The ROWP is to carry out a flow test to confirm all wastewater sources from the building arrive at the onsite wastewater system. The test shall only use sufficient water to confirm the arrival of the flow and not be allowed to continue for either a particular length of time or volume that is intended to “flood” or “stress” the onsite system. The flow test also aids with confirming whether a soapbox, grease trap or even a separate onsite sewage system serves the building or not. For a Maintenance Inspection, the ROWP may consider reducing the flow test to several water sources only to minimize time and costs to the client, however this should only be considered for a system that the ROWP has already inspected before and believes a more extensive testing is not warranted.

8.2.5 Fluid movement within the components of the system including the dispersal area is to be tested against the requirements of the design.

8.2.6 A dye test is not to be used as the sole system performance test.

8.2.7 Effluent sampling (BOD, TSS) is to be done for all type 2 and 3 systems. Sampling of type 1 systems is at the discretion of the ROWP. The situation may also indicate testing of pH, FOG, ammonia, nitrate, influent, etc.

8.2.8 The following components are to be exposed, examined and tested when present:

a) A sewage basin located inside a building is to be tested for function when present but the ROWP is not required to open the sewage basin for further evaluation
b) All tanks, chambers and treatment plants related to the onsite system at the inlet, outlet, dividing baffles and interior components
c) All mechanical components or items with moving parts
d) All treatment devices
e) All dispersal area components designed to be viewed or tested.

8.3 Records and Documentation

8.3.1 The ROWP is to store all field notes, reports, letters, photographs/videos, test results, etc. in a file devoted to each individual inspection performed. Each inspection file is to be easily and quickly retrievable and protected from damage on a permanent basis. Where no system plan is contained within a permit or Filing, or the plan available is found to be inaccurate or not as-built, the ROWP is to provide the client with either a basic but accurate plan, or a description of the key component locations with photographs such that the property owner may find the components in the future. The plan should:

a) Be oriented to true north
b) Be reproducible in black and white
c) Be on 8.5 x 11, 8.5 x14 or 11/17 paper where possible
d) Have lettering that is easily readable (minimum 2 mm height)
e) Include the inspection file or reference number, location address, and date
f) Show the suspected property lines or distances to them where possible
g) Any wells, water sources, water bodies, breakouts, buildings & structures (approximate dimensions & locations), retaining walls or similar features that provide a reference to the onsite system components
h) Approximate slope and direction of the slope on and around the onsite system

8.3.2 For a performance inspection, a general sketch drawn to a scale is acceptable, or where this cannot be achieved, dimensions should be shown or detail drawings added. This is to include the access points for a septic tank, treatment plant, distribution box and the general dispersal area. For a compliance inspection, a more detailed and accurate reporting of measurements, including the location of the dispersal components and setbacks to any relevant portion of the system where a structure is to be built or added onto and setbacks to the onsite system need to be confirmed. A compliance inspection may be required if no filing is on record, and the owner needs the systems details for legal and/or home conveyance (sale) purposes.

8.4 Reporting

8.4.1 The ROWP is to provide a written report, which is to include the following:

a) Explanation of system type, expected function and components
b) Information on the location of the system components, including a general diagram or photographic record for a performance inspection, and a detailed diagram for a compliance inspection
c) Explanation of the current performance using the terminology as listed in 8.4.2 (written for the lay-person)
d) Comparison of the system as installed with the permit/Filing documents
e) Explanation of repairs and improvements
f) Explanation of system maintenance requirements if included within the Filing documents or creation of simple O&M plan specific to the system being inspected and the client's needs if not included
g) Explanation of the nature and exact locations of any problems, especially in the case of a "performance malfunction", "illegal or prohibited feature", or a "suspected health or safety hazard"
h) System use and care information.
i) If a compliance inspection, a detailed site/system drawing with confirmed setback distances, components, structures and utilities.

8.4.2 The following terminology is to be included and explained within the report:

a) ***This system is operating in a normal manner as intended by its design*** - this is when:

- All wastewater was confirmed to arrive at each component and travel through the system in a normal manner without wastewater backing up or being diverted;
- In a gravity distribution system, all dispersal pipes receive approximately equal flows, or, flows with variations not exceeding 10% for any one pipe;
- In a pressurized distribution system, all laterals receive approximately equal flows and the squirt height as measured at the ends of all laterals does not vary by more than approximately 10% from the original squirt height recorded at time of commissioning, or as compared to all other laterals;
- The effluent sample(s) taken from the treatment plant/process meet the permit/Filing document standards;
- For a lagoon, the effluent level is below the design freeboard;
- Where a treatment plant or process is installed, the results of laboratory testing will determine whether the effluent quality meets the requirements of the design. Even if all other aspects of the system are or appear in good order, where effluent strength exceeds the requirements, the system is identified to be experiencing a "performance malfunction."

b) ***This system is operating, but a partial restriction or backing up is occurring*** - this is when:

- All wastewater was confirmed to arrive at each component but was found to partially back up or was restricted at any component. This can be evident as a fluid level higher than the invert of the outlet pipe but not reaching the mid-point of an inlet or outlet pipe;
- In a gravity distribution system, all dispersal pipes receive flows however variations exceeding 10% but less than 25% for any one pipe was observed inside and along the runs of any dispersal pipe;

• At the end of a pump cycle or flow test, effluent is observed to flow backward into the distribution box from one or more distribution pipes;
• In a pressurized distribution system, flows are visible from all laterals, but one or more laterals had a variation greater than 10% from the original squirt height recorded in the system commissioning or as compared to the other laterals;
• For a lagoon, the effluent level is approximately at the designed freeboard.

c) ***Performance malfunction*** - this is when:

- The dispersal area has less Vertical Separation than required by the standards at the time of construction
- The fluid level is at or above the mid-point of any inlet or outlet pipe of any component;
- Any backing up is found in a pump chamber, siphon or other dosing device contrary to the normal operating level for that component;
- Wastewater is escaping or groundwater is entering from any point in the system contrary to plan/design;
- In a gravity distribution system, one or more dispersal pipes have no visible flow or variations of 25% or more are observed inside and along the runs of any dispersal pipe;
- In a pressurized distribution system, one or more laterals have no visible flow or variations of 25% or more are observed in any lateral during a squirt test;
- Effluent or monitoring port samples do not meet the requirements of the original permit or Filing document;
- Intrusion of solids into the dispersal area (high BOD due to inadequate septic tank maintenance) and diminished performance of CTDS, type 2 or type 3 technologies (no longer meeting the SSR performance standards);
- For a lagoon, the effluent level is above the design freeboard of the lagoon (normally 0.6 m below the top of berm).

d) ***System operation could not be fully determined*** - this is when:

- The ROWP could not gain access to the building to confirm where all wastewater flows travel to.
- The system has not been in use for several weeks and the ROWP has concerns that observations may not reasonably reflect behaviour and/or performance of the system when in actual use;
- The water supply into the building was not functioning;
- One or more components could not be accessed, potentially due to:
  - Depth of hand digging required is more than 60 cm below the surface resulting in a large excavation not anticipated or normally encountered,
  - Soils are very compacted and breaking through this layer could result in damage to a component below,
  - Soils contain large rocks, cobble, building debris, that may result in a large excavation not anticipated or normally encountered
  - High groundwater conditions over top of a component,
  - Landscaped areas where the disturbance required for gaining access to a component may upset the property owner and/or require additional restoration work that would add an unforeseen expense to the client's budget,
  - The component is inaccessible due to asphalt, concrete or other paving materials, a structure or other obstruction

- The effluent sample is about to be submitted to the lab. If an effluent sample could not be obtained, the reason should be explained in the report

e) ***Illegal or prohibited feature*** - this is when:

- It is suspected or confirmed that the system was installed without a permit or completed Filing document. This should be clarified in the report with all details given to substantiate the claim;
- There is an intentional or non-intentional diversion that could or is allowing effluent to escape continuously or seasonally from the system;
- The number of bedrooms or building floor space exceeds the original design of the system or the permit or Filing document issued;
- A second residence or building is connected which exceeds the original design of the system or the permit or Filing document issued;
- A sani-dump or other connection is installed that permits wastewater from sources other than this building to enter the system;
- A garburator or other device is installed in the building and connected to the system if the permit or Filing documents state they are not allowed for this system;
- Backwash from, or floor drain around, a swimming pool or hot tub is connected to the system;
- Backwash or drain from water treatment equipment is connected to the system;
- A building, or extension to the building, was made over top a component;
- The system is partially/fully within a neighbouring property;
  Note: Only permitted if both property owners make a legal agreement that is registered on the land titles;
- Some or all of the system was modified, reducing horizontal setback standards as required at the time of construction;
- One or more components do not meet required setbacks;
- A residential system is receiving high strength and/or high volumes of wastewater; and,
- The type and/or volume is contrary to the intended design and is not permitted unless prior permission from the Authorized Person/Health Authority was obtained.

f) ***Potential health or safety hazard*** - this is when:

- A Biological Hazard may be present:
  - Effluent is or appears to be escaping the system to the surface;
  - Effluent is backing up into the building where the effluent is or could likely overflow at some point within a plumbing fixture or appliance; and,
  - Effluent is or has the potential of coming into contact with people in any manner that is or could pose a Health Hazard as defined under the Sewerage System Regulations, provincial *Health Act*, or any other regulation or act that may be applicable.
- An Electrical Hazard may be present:
  - An electrical health hazard is suspected or has been identified.
- A Physical Hazard may be present:
  - A severely broken, damaged, or unsecured lid, or a structurally unsound component that could pose a physical health hazard has been identified.

Where a PI discovers or suspects a health or safety hazard they should report the issue to the landowner immediately. Notification of the location and circumstances needs to be made to the local Health Authority, BC Safety Authority (electrical), local Building Department (electrical), Ministry of Environment, Environment Canada, Department of Fisheries & Oceans, or other appropriate agencies/authorities who will investigate and make a final determination whether such a hazard exists or not. The PI is required to make this notification under the ASTTBC Code of Ethics Principle 1 and 9.

g) ***Improvement*** - a recommendation that could improve safety or performance, or prevent a malfunction or health hazard if implemented. Often, these are items that were not required at the time the system was installed, such as risers to the surface, an effluent filter, or other features on systems built pre-Sewerage System Regulations. A baffle still in place but showing deterioration (preventative maintenance), or a pump chamber that does not have a high level alarm are two examples of improvements which could prevent serious future problems.

h) ***Caution*** - a component, device, or feature that while allowed or legal to use, can be a source of problems or a need for increased maintenance and monitoring of some or all of the system. Continuous flushing urinals, over-sized jet tubs, multi-headed showers and in-sink garbage disposals for example. If any of these items are specifically not allowed according to the information on the permit or Filing, the item also becomes an “Illegal or Prohibited Feature.”

i) ***Repair*** - a requirement that affects safety or performance and is necessary regardless of the system’s age. A missing baffle (performance) or a cracked lid (safety) are two examples of repairs.

8.5 Completion

8.5.1 If the ROWP is concerned about the quality or function of any electrical works they are to inform the client and/or property owner of the situation and refer to a qualified electrician to assess and correct as required.

8.5.2 Where there are significant discrepancies between the Filing document and the existing system, the ROWP is bound by the ASTTBC code of ethics to report the situation to the ASTTBC for investigation.

8.5.3 Where the system is used in a manner that is contrary to its design or O&M Plan, the ROWP is to inform the client and warn of consequences to the performance and/or lifespan of the system.

8.5.4 Where the ROWP finds that there is or appears to be an error within the plan, installation, or maintenance of the system, the ROWP is to inform the client of the potential problem and contact the ROWP involved and/or the ASTTBC as is appropriate to resolve the situation.

8.5.5 Where a potential health or safety hazard is found, the ROWP is to immediately report the situation to the appropriate authorities.

8.5.6 The ROWP is to be prepared to act as an expert witness as situations observed during an inspection may become a legal matter with little warning.

8.5.7 Legal clauses such as waivers or statements limiting liability within a contract or report may not be supportable due to the nature of the work, and do not eliminate the responsibility of the ROWP to provide inspection services which meet due diligence requirements.

8.5.8 If the ROWP also provides planning, installation, or maintenance services that are identified to be needed during the inspection, care must be taken to prevent the perception of a conflict of interest. The ROWP must act in a neutral, unbiased manner at all times during the inspection. They shall not offer services to repair, replace or maintain the system, or promote a particular product or device which the ROWP sells, distributes or receives a fee for, until the inspection is completed and after ensuring the client is provided the names and contact details of other ROWPs in the area who can also provide such services.

8.6 Building Departments

8.6.1 Where a building department or regional district requires a ROWP to provide a letter or report on the performance or suitability of an existing sewage system as a condition of issuing a building or occupancy permit to the property owner or agent, the ROWP shall:

a) Review original filings or Health Authority permits associated to the sewage system for size, intended use, and other conditions or restrictions that may apply;
b) Review building plans, building permit applications and related documents provided by the property owner or agent to determine if a change in size, function and/or location of a building, or other structure will or could negatively impact the sewage system;
c) Conduct and document an inspection of sufficient thoroughness to confirm location, performance and compliance with the standard “of the day” of the sewage system in relation to the building or occupancy permit. ROWP Private Inspectors are to follow the Guidelines for Inspection as listed in Appendix ‘G’ and all other ROWPs are strongly recommended to adhere to these Guidelines to reduce their liability.

8.6.2 Where conditions are favourable to support the building or occupancy permit, the ROWP shall:

a) Provide the property owner/agent and building department/regional district with a stamped, signed and dated report explaining reasons in support of the permit, or a letter in a format requested by the authority requiring the review. The report or letter should reference plans, detailed drawings, or other significant documents examined during the review as being stamped, signed and dated by the ROWP confirming these were the documents examined.

b) Stamp, sign and date all copies of building plans being submitted by the property owner, preferably near the lower right corner of plans or detailed drawings, with a note clearly stamped or written above stating “Reviewed in relation to sewage system only”. This is to ensure other parties reading the letter or report do not assume the ROWP is taking responsibility for any other aspect of the project than specified within the letter or report and only as it relates to the sewage system serving the property in question.