

Land and Water Boards of the Mackenzie Valley



LWB Guidelines for Closure and Reclamation Cost Estimates for Mines

June 22, 2021

Commented [PT1]: Revisions made to content from the current version of these Guidelines (released in 2017) are in track changes to help the reader. Where text was simply moved, it is not in track changes to improve readability.

Please note that Section 3 is a new section. This includes content in subsections 3.1, 3.1.1, 3.1.2, and 3.1.3. This information has not been identified in track changes to improve readability.

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Definitions and Acronyms

TERM	DEFINITION
Advanced Mineral Exploration	Advanced exploration is mineral exploration typically marked by the start of bulk sampling. It typically consists of large diameter drilling and trenching, and in larger-scale projects, development of declines or adits, and some on-site ore processing. Roads are often built; field camps can increase in size and heavy equipment may be brought in. The activities associated with advanced exploration typically trigger a land use permit and water licence.
Applicant	A person who has filed an application with the Board.
Application	Any application for or in relation to a land use permit or water licence submitted in accordance with the Mackenzie Valley Resource Management Act (MVRMA), the Waters Act, or their regulations, and includes a request for a Board ruling, a plan approval, or any step required to advance a Board proceeding.
Boards	Part 3 of the MVRMA establishes regional land and water boards with the power to regulate the use of land and water, and the deposit of waste, including the issuance of land use permits and water licences, so as to provide for the conservation, development, and utilization of land and water resources in a manner that will ensure the optimum benefit to the residents of the management area and of the Mackenzie Valley and to all Canadians. Part 4 of the MVRMA establishes the Mackenzie Valley Land and Water Board (MVLWB). Regional Land and Water Boards have been established in the Gwich'in, Sahtu, and Wek'èezhìi management areas and now form Regional Panels of the MVLWB.
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada (formerly AANDC/INAC)
Closure Cost Estimate	An estimate of the cost to close and reclaim a project. Also referred to as a security estimate.
Closure Criteria	A set of standards that measure the success of selected closure activities in meeting closure objectives. Closure criteria may have a temporal component, for example, a standard may need to be met for a pre-defined number of years. Closure criteria can be site-specific or adopted from territorial/federal or other standards and can be narrative statements or numerical values.
CRP	Closure and Reclamation Plan.
Engagement	The communication and outreach activities a proponent undertakes with affected parties prior to and during the operation of a project.
GLWB	Gwich'in Land and Water Board.
GNWT	Government of the Northwest Territories.
ICRP	Interim Closure and Reclamation Plan.
Indigenous government and organization	An Aboriginal organization representing a First Nation (as defined in section 2 of the MVRMA), Métis or Inuit organization, the Tłı̨chọ First Nation, the Tłı̨chọ Government, or the Déłı̨ne Got'ı̨ne Government.
Landowner	In respect of settlement lands, Tłı̨chọ lands, Déłı̨ne lands, or other private.

	lands, the title holder; and in respect of any other lands, the minister of the Crown or the Commissioner of the Northwest Territories, as the case may be, who has administration and control of the lands.¹
Land use permit	A regulatory authorization required for an activity set out in sections 4 and 5 of the Mackenzie Valley Land Use Regulations; or a land use permit (type C) required by Tłı̨chǫ law for use in Tłı̨chǫ lands or by a Dłéjı̨nę law for a use of Dłéjı̨nę lands, respectively, for which a type A or type B land use permit is not required.
Mackenzie Valley	That part of the Northwest Territories bounded on the south by the 60th parallel of latitude, on the west by the Yukon Territory, on the north by the Inuvialuit Settlement Region as defined in the Agreement given effect by the <i>Western Arctic (Inuvialuit) Claims Settlement Act</i> , and on the east by the Nunavut Settlement Area as defined in the Nunavut Land Claims Agreement Act, but not including Wood Buffalo National Park.
MVLWB	Mackenzie Valley Land and Water Board.
MVLUR	Mackenzie Valley Land Use Regulations.
MVRMA	<i>Mackenzie Valley Resource Management Act</i> .
NWT	Northwest Territories
Progressive reclamation	Selected closure activities that can be taken at advanced mineral exploration and mine sites before permanent closure. Progressive reclamation takes advantage of cost and operating efficiencies by using the resources available from an operation to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the closure objectives.
Project	Any activity that requires a water licence or land use permit.
Proponent	Applicant for, or holder of, a water licence and/or land use permit.
RECLAIM cost model (or RECLAIM)	The preferred tool for calculating closure cost estimates for activities that require a water licence (including those that also require a land use permit). RECLAIM is specific to mining and oil and gas projects, and is administered by the GNWT or CIRNAC.
Reclamation	The process of returning a disturbed site to its natural state, or to a state which prepares it for other productive uses that prevents or minimizes any adverse effects on the environment or threats to human health and safety.
Reclamation research	Literature reviews, laboratory or pilot-scale tests, engineering studies, and other methods of resolving uncertainties. Proponents conduct reclamation research to answer questions pertaining to environmental risks; the design of reclamation research plans aims to provide data and information which will reduce uncertainties for closure options, selected closure activities, and/or closure criteria.
Reviewer	Any person or organization who submits comments on documents distributed for public review by the Boards. By submitting comments on the application (via the Online Review System or otherwise), reviewers become parties to the regulatory proceeding for the application and must abide by

¹ See section 1 of the MVLUR

	the MVLWB Rules of Procedure.
Security adjustment	A change in the security deposit held under a land use permit or water licence, to reflect changes in the closure plan, progressive reclamation, etc.
Security deposit	Funds held by the landowner or land manager (the GNWT, CIRNAC, or indigenous government and organization) that can be used in the case a project proponent fails to reclaim the site, or carry out any ongoing measures that may remain to be taken after the abandonment of the project. Further, the funds can also be used by the GNWT and CIRNAC to take measures to address situations of non-compliance at the site (e.g. spills, releases, mitigations, etc.).
SLWB	Sahtu Land and Water Board.
Type A water licence	A water licence required by Column IV of Schedules D to H of the Waters Regulations on non-federal areas; or by Column IV, Schedules IV to VIII of the Mackenzie Valley Federal Areas Waters Regulations on federal areas.
Type B water licence	A water licence required by Column III of Schedules D to H of the Waters Regulations on non-federal areas; or by Column III, Schedules IV to VIII of the Mackenzie Valley Federal Areas Waters Regulations on federal areas.
WLWB	Wek'èezhì Land and Water Board.

1.0 Introduction

Mining plays a large role in the economy of the Mackenzie Valley. Each mine will eventually come to the end of its operational life and will need to be closed and reclaimed. Unfortunately, in the past there have been instances where mines have been abandoned without completing closure and reclamation of the operation, leaving the cost of clean-up to the [government](#). In response to these past events, the modern regulatory framework has been designed to ensure that proponents close and reclaim a project in an environmentally responsible way and pay for the cost of that clean-up. Proponents that wish to construct and operate a mine are required to [provide](#) a security deposit with [the landowner or land manager](#) to cover the costs to close and reclaim the site, should the proponent become insolvent and not meet these obligations.

[In the Mackenzie Valley, the Gwich'in, Sahtu, Wek'èezhii, and Mackenzie Valley Land and Water Boards](#) determine the amount of the security deposit, based on the estimated costs of closing and reclaiming the site (i.e., the closure cost estimate). The closure cost estimate is based on the Closure and Reclamation Plan (CRP) for the project. The MVLWB/INAC (2013) *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories* (the 2013 MVLWB/INAC Closure Guidelines) outline the requirements for CRPs. A proponent is required to develop a CRP and maintain a security deposit through the legally binding conditions set out in the water licences and land use permits issued by the Boards.

[Typically, a conceptual CRP is required during the project approval stage, followed by several interim CRPs during operations, and a final CRP before closure.](#)² As the CRP is refined [throughout the life of the project](#) and as progressive reclamation is completed, the closure cost estimate can be adjusted accordingly.

The Boards are guided by the INAC (2002) *Mine Site Reclamation Policy for the Northwest Territories* (INAC [2002] Reclamation Policy) when approving a mine's closure and reclamation plan and determining the corresponding security deposit. In the context of devolution of lands, rights in respect of water, and non-renewable resources, the Government of the Northwest Territories has adopted this policy on an interim basis. The GNWT [has endorsed](#) the 2013 MVLWB/INAC Closure Guidelines [and relies on them when preparing its submissions to the Boards](#).

1.1 Purpose and Objective

The purpose of these Guidelines is to:

1. describe the Boards' expectations of proponents when preparing closure cost estimates (section 2.0);
2. outline the Boards' processes for determining how much security may be required to cover the costs of closure and reclamation (section 4.0); [and](#)
3. [outline the Board's expectations and considerations for refunding security.](#)

² See the MVLWB/INAC (2013) *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine sites in the Northwest Territories* for more information.

The Boards' objective in developing these Guidelines is to enhance transparency, process efficiency, and consistency in setting and adjusting security throughout the life of a project.

~~In the Mackenzie Valley, closure cost estimates are typically developed using the RECLAIM model (discussed further in section 2.2), which is developed and maintained by the GNWT and INAC. The RECLAIM model is accompanied by a RECLAIM User Manual with instructions on how to use RECLAIM. The Closure Cost Estimating Guidelines compliment the RECLAIM User Manual, and both documents should be used as references when preparing closure cost estimates.~~

Commented [PT2]: This information has been relocated to section 1.3

1.2 Authority

The Boards' authority to require proponents to provide and maintain security is granted under the *Mackenzie Valley Resource Management Act* (MVRMA, federal legislation) and the *Waters Act* (territorial legislation); this authority encompasses all areas across the Mackenzie Valley, including land owned by Indigenous governments, federal areas, and land administered by the territorial government.³

Subsection 11(1) of the *Waters Regulations*, subsection 12(1) of the *Mackenzie Valley Federal Areas Waters Regulations*, and subsection 32(1) of the *Mackenzie Valley Land Use Regulations* authorize the Boards to determine the total amount of security to be provided:

The Board may fix the amount of security required to be furnished by an applicant in an amount not exceeding the aggregate costs of

- a) abandonment of the undertaking;⁴
- b) restoration of the site of the undertaking; and
- c) any ongoing measures that may be necessary after the abandonment of the undertaking.⁵

1.3 Application

These Guidelines will be applied by the MVLWB, GLWB, SLWB, and WLWB.

In general, these Guidelines apply to new and existing mining, milling, and advanced mineral exploration projects that require a type A or type B water licence. In the Mackenzie Valley, closure cost estimates for these projects are typically developed using the RECLAIM model (discussed further in section 2.2), which is developed and maintained by the GNWT and CIRNAC. The RECLAIM model is accompanied by a RECLAIM User Manual with instructions on how to use RECLAIM. The RECLAIM User Manual is periodically updated by the GNWT and CIRNAC. These Guidelines compliment the RECLAIM User Manual, and both documents should be used as references when preparing closure cost estimates. For projects that require only a land use permit and no water licence, closure costs estimates are typically developed using the MVLWB security template, not RECLAIM.

³ See MVRMA sections 71, 72.11 and subsection 60(1.1), and *Waters Act* subsection 35(1) and paragraph 63(1)(g).

⁴ 'undertaking': defined in the *Waters Regulations* as "an undertaking in respect of which water is to be used or waste is to be deposited" (see Schedule B of the *Waters Regulations* for types of undertakings). For the purposes of this document, undertaking refers to the Project.

⁵ The quoted material is identical in all three Regulations except the *Waters Regulations* and the *Mackenzie Valley Federal Areas Waters Regulations* include references within the quoted subsection to other parts of the respective regulations.

These Guidelines can be used to inform closure cost estimates for projects which require a water licence but are not mining, milling or advanced mineral exploration projects (e.g., oil and gas projects); the Boards' processes and expectations for estimating closure costs will typically be the same as those outlined in these Guidelines.

1.4 How the Guidelines Were Developed

Sections 65 and 102(1) of the MVRMA authorize the Boards to develop the Guidelines:

65. Subject to the regulations, a board may establish guidelines and policies respecting permits and other authorizations, including their issuance under this Part.

The Boards implement this provision through the Areas of Operation Initiative. In 2015, under this initiative, the Boards formed several teams to work on issues identified as priorities related to various areas of operation.

The [Closure Process Team](#) was one team established at that time, tasked to work on several identified issues related to the Boards' role in setting security. The [Closure Process Team's](#) priority was to finalize the *Draft Guidelines for Closure and Reclamation Cost Estimates for Mine Projects*, which was developed and distributed for public review on December 22, 2014. Comments were due by February 18, 2015. Careful consideration was given to comments received during the public review of the draft document. The content of the Guidelines is based on legal and policy research, input from Board staff, and is consistent with past and present practices of the Boards.

Commented [PT3]: This paragraph will be updated in the final version of the Guidelines.

1.5 Monitoring and Performance Measurement for the Guidelines

Mechanisms will be required to monitor and measure performance and to evaluate the effectiveness of these Guidelines. In accordance with the principles of a management systems approach (e.g., plan-do-check-act), the Boards will develop a performance measurement framework. These Guidelines will be reviewed and amended as necessary within that framework. The framework will also describe how affected parties, industry, and government will be involved in the review process.

2.0 Boards' Expectations for Closure Cost Estimate Submissions

This section of the Guidelines describes the Boards' expectations for closure cost estimates submitted by a proponent or a reviewer; it is intended to act as a "how-to" guide for developing closure cost estimates and should be used in conjunction with the RECLAIM User Manual.

The Boards' expectations are the same whether the submission is made during a licensing or permitting proceeding, or during the term of a licence.

2.1 Obtain the Most Recent Version of RECLAIM to Develop Your Estimate

The RECLAIM model is the Boards' preferred closure cost estimation model; the model reflects the principles of the INAC (2002) Reclamation Policy (the Policy) and is based on reasonable and well-founded

assumptions.⁶ For example, the unit costs in RECLAIM are based on independent third-party contractor costs, as specified in the Policy. [RECLAIM is updated periodically to incorporate new information, lessons learned, inflation and any other relevant changes into the unit costs and default line items. Proponents should obtain the most recent version of RECLAIM and the RECLAIM User Manual from the GNWT⁷ or Land and Water Boards' website⁸. Proponents should adjust their estimate for inflation, based on the number of years since the RECLAIM model was updated or since the RECLAIM estimate was last adjusted for inflation. See the RECLAIM User Manual for more information, including using the inflation function of the model.](#)

Should a proponent or reviewer wish to use an alternate method for estimation of closure costs, the onus is on the proponent or reviewer to propose an alternate method prior to submitting the estimate. Requests to use a different method must be accompanied by:

1. a description of how the proposed method works;
2. a description of how the method reflects the principles in the INAC (2002) Reclamation Policy; and
3. a rationale for why a different cost estimating method is being proposed.

The alternate method should be discussed with the GNWT, CIRNAC, or other landowners, prior to requesting the Board's approval (see section 2.2 on collaboration for more information). If the Board approves use of an alternate method, the proponent (or reviewer, as the case may be) may then submit the closure cost estimate using this model.

In order to develop a defensible closure cost estimate in RECLAIM, users of the model should have sufficient expertise in mine closure and related fields, and in the costing of large engineering projects. RECLAIM users should follow the instructions within the model and its accompanying RECLAIM User Manual.

2.2 Engage with the Landowner or Land Manager Before Submitting an Estimate

When preparing closure cost estimates, proponents [should](#) collaborate closely with the GNWT,⁹ CIRNAC,¹⁰ or other landowners or [land managers](#). This collaboration should occur prior to and during the Boards' [regulatory](#) process; in the case of a licensing proceeding (section 3.1), a proponent would begin this collaboration during pre-[submission](#) engagement (Figure 1). Where possible, consensus on reclamation unit costs or [closure](#) activities and line items should be sought. [Where consensus cannot be achieved, this collaboration should be conducted to an extent to allow](#) the proponent and the appropriate authority (e.g., the GNWT, CIRNAC, etc.) to provide a thorough rationale for any differences in their cost estimates.

Commented [PT4]: This was previously section 2.1 Collaborate with Parties Prior to Submitting an Estimate. It has been relocated to section 2.2 and the title has been adjusted.

⁶ INAC (2002) [Mine Site Reclamation Policy for the Northwest Territories](#).

⁷ See the [GNWT Department of Environment and Natural Resources website](#)

⁸ See the [Mackenzie Valley Land and Water Board website Policies and Guidelines page](#)

⁹ For projects outside federal areas requiring a water licence, and for any projects on territorial lands

¹⁰ For projects on federal areas

[Engagement can greatly improve the efficiency of the Board’s review and approval process and prevent significant delays. It can also improve the estimate’s accuracy and allow the proponent and the landowner to begin discussions about the form of security. For these reasons, the Board expects proponents to:](#)

- [Engage with the landowner or land manager about the closure cost estimate as part of pre-submission engagement;](#)
- [Provide any information the landowner requests to help them understand differences in opinion regarding assumptions, quantities, unit costs, etc. or to prepare their own estimate; and](#)
- [Submit an explanation for all differences between the proponent and the landowner in the documentation for the closure cost estimate,](#)

[The Board may request that the landowner or land manager submit cost estimates for all areas of disagreement or a full closure cost estimate.](#)

In some cases, reviewers may propose a closure cost estimate; in which case, the reviewer should also collaborate with the proponent and the GNWT, [CIRNAC](#), or the appropriate landowner, prior to submission of the estimate to the Boards. [Note, the Board may issue direction to a company or licensee to engage with the appropriate landowner and land manager to work together to understand and address differences.](#)

2.3 Develop the Closure Cost Estimate

As stated in the introduction, the closure cost estimate for a given mine is directly linked to the proponent’s CRP. [This must reflect the third-party contractor costs as procured by the landowner or land manager to implement the CRP because landowners and land managers will be burdened with closure and reclamation of any abandoned sites. This aligns with the INAC 2002 Mine Site Reclamation Policy for the Northwest Territories.](#)¹¹

[The closure cost estimate must include](#) all direct and indirect costs that would be incurred from the time the site is abandoned, through interim care and maintenance,¹² completion of [closure activities](#), and post-closure monitoring and maintenance, until closure of the project has been completed in accordance with the final CRP (i.e., closure criteria have been met). [Technical guidance on estimating direct and indirect costs is in the RECLAIM Manual. Guidance on re-estimating direct and indirect costs when requesting a security refund for completed closure activities is in Section 3.1 of these Guidelines.](#)

[All estimates are to include post-closure monitoring costs \(for example water quality monitoring, geotechnical inspections, etc.\) and post-closure maintenance costs \(for example the costs of repairing eroded areas of a tailings cover that would be reasonably expected in the future\). This is consistent with the requirement to identify monitoring and maintenance activities in the CRP, as described in the 2013 MVLWB/INAC Closure Guidelines. It is also consistent with the INAC \[2002\] Reclamation Policy, which](#)

¹¹ [INAC \(2002\) Mine Site Reclamation Policy for the Northwest Territories, page 6.](#)

¹² Refer to “Insolvencies” section in INAC (2002) Reclamation Policy for a description of the processes that may be undertaken when a company becomes insolvent or abandons a project. These legal processes would take place during a period of “care and maintenance” for the project.

[states for example that “adequate security should be provided to ensure the cost of reclamation, including shutdown, closure and post-closure, is born by the operator of the mine rather than the Crown.”](#) [Monitoring and maintenance plans in the CRP must have enough detail to support the cost estimate](#)

[As closure planning progresses and the Board approves closure objectives and criteria, the proponent should link objectives and criteria to the relevant items in RECLAIM. Closure objectives that are performance-based should be flagged, as they may require security to be held back \(see Section 3.1.2\). Early work on closure objectives and criteria is critical to support both closure planning and security refunds for progressive reclamation.](#)

There may [also](#) be costs which are not specifically identified in RECLAIM but are required in order to implement the CRP. RECLAIM is an estimating tool which allows for the addition of line items. If a proponent or reviewer identifies closure costs for activities in the CRP that are not included in the RECLAIM model, these costs should be added as line items in RECLAIM. [For example,](#) there are three regulatory compliance costs not included in RECLAIM which will likely be incurred during closure and reclamation:

- Engagement costs: the Boards’ (2013) *Engagement and Consultation Policy* and their (2014) *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits* require all holders of water licences and land use permits to engage with affected parties. Therefore, engagement costs during the closure planning, active closure, and post-closure phases should be included in the estimate.
- Regulatory compliance costs may include, but are not limited to: transfer or renewal of authorizations (e.g., submission of applications, participation in technical sessions and public hearings); preparing required submissions (e.g., annual reports required by the water licence, responses to information requests); reporting (e.g., monitoring reports, reclamation completion reports); and responding to reviewer comments during public reviews.
- All costs for finalizing the CRP prior to commencement of reclamation, which may include but not be limited to the completion of any outstanding reclamation research.

While estimates of these costs may not be well refined at the initial licensing phase, during operations a proponent will complete regulatory work, develop and update its CRP, complete reclamation research, and undertake regular engagement; therefore, these costs are anticipated to become better refined through the operational phase of the project.

2.4 Develop Supporting Documentation

A document that describes the assumptions, inputs, [and data sources](#) used to develop a closure cost estimate must accompany the estimate submitted to the Board. In addition to this document, assumptions and data sources can be directly entered into RECLAIM. When submitting a RECLAIM estimate, users must submit the EXCEL version of the estimate which the Boards will post to the public registry. Requests for adjustments to the security deposit [over time must](#) be accompanied by a detailed description of each adjusted line item, a rationale for the adjustment, and supporting [documentation](#).

Commented [PT5]: This concept is in the section on security adjustments in the existing guidelines. This has been relocated here as it is relevant to this section.

[Adjustments could be as a result of reclamation research, an updated and approved Closure and Reclamation Plan, etc. \(See section 4.2 for more information about security adjustments.\)](#)

The Boards require additional supporting documentation if a proponent or reviewer wishes to use a site-specific cost [or](#) implement a phased approach to security. These are discussed in more detail below. [Documentation required for security refund requests is described in Section 3.1.3.](#)

2.4.1 Documentation for Proposed Site-Specific Costs

The RECLAIM model has unit costs for a suite of possible closure and reclamation activities. For example, RECLAIM has unit costs for hauling and loading reclamation materials and for removing buildings. In most cases, proponents and reviewers use the set of default unit costs provided with the RECLAIM model to develop closure cost estimates for a project. The Board encourages use of the default costs. If the default costs do not reflect site costs, the Estimator tab in RECLAIM can be used to develop certain site-specific costs, as discussed further in the RECLAIM User Manual.

Should a proponent or reviewer believe a default unit cost in RECLAIM is not reflective of site-specific costs but does not believe the Estimator [tab](#) is applicable, it is possible to request approval of a site-specific cost by submitting the following documentation with the RECLAIM estimate:

- a) an explanation of why the cost in RECLAIM does not apply; and
- b) an estimate of the site-specific cost being proposed, with detailed supporting calculations and documentation, including evidence that the site-specific cost represents third-party contractor costs. If a site-specific unit cost is based on confidential information (e.g., contractor bids), the Board can consider accepting confidential information as outlined in the Board's Rules of Procedure.

When both requirements (a) and (b) are met, the Boards will consider whether the proposed site-specific cost is appropriate. Site-specific costs developed without using the Estimator should be discussed with the GNWT, [CIRNAC](#), or other landowners, prior to submitting them to the Board. As noted above, site-specific unit costs must reflect third-party contractor costs, not the costs that would be incurred if the proponent conducted the work.¹³

2.4.2 Documentation for Proposed Timelines for Providing Security

A proponent or reviewer may propose a phased payment approach for [providing](#) the required security deposit. This allows the [amount of security held](#) to increase as mine development progresses (i.e., as liability associated with the closure and reclamation the site increases) through payment of security in installments.¹⁴ Each phase should be based on a pre-defined milestone. For example, a proponent [may](#) propose to submit an initial deposit prior to construction (1st milestone), an increase prior to mining (2nd milestone), and another increase prior to milling (3rd milestone). [The](#) proponent should submit [a closure](#)

¹³ INAC (2002) *Mine Site Reclamation Policy for the Northwest Territories*, page 6.

¹⁴ The practice of including phased installments in the licence is consistent with the INAC (2002) *Mine Site Reclamation Policy for the Northwest Territories*, which states that "[t]he amount of financial security on deposit will normally increase proportionately as mining proceeds. Generally, this implies that as the mine site grows, water usage increases and the costs to restore a site expand. Accordingly, reclamation costs are usually estimated to rise over the life of the mine" (Page 10).

cost estimate for each milestone, for example by submitting one RECLAIM estimate for each milestone. Supporting rationale should be submitted with the RECLAIM estimate(s) explaining how each closure cost estimate has been calculated. This rationale must include a discussion of how the proposed security deposit for each milestone ensures the estimated cost to close and reclaim the site never exceeds the security deposit held during any phase of the project. Proponents are strongly encouraged to discuss proposed phased payment approaches with the landowner or land manager as part of pre-submission engagement.

2.4.3 Demonstrate Completion of Any Progressive Reclamation

The Boards will consider requests to reduce security for progressive reclamation work after it has been completed. The 2013 MVLWB/INAC Closure Guidelines require proponents to submit:³⁷

1. A Reclamation Completion Report; to be submitted once progressive reclamation is completed.
2. A Performance Assessment Report; to be submitted after monitoring has been completed assessing the performance of the reclamation work. The report must demonstrate how closure objectives and closure criteria have been met.

The MVLWB/INAC (2013) Closure Guidelines states: “with each performance assessment report there may be an opportunity to revise the security estimate, depending on the stage of the operation and the closure and reclamation plan”.

Should the Boards determine security is to be refunded for completion of progressive reclamation, the closure cost estimate and security deposit will continue to include any remaining costs, for example the costs of future monitoring and maintenance.

Prior to submitting a request for a refund for completion of progressive reclamation, proponents should contact Board staff.

3.0 Board Expectations for Security Refunds for Completed Closure Activities

This section outlines the Board’s expectations regarding security refunds, to promote the timely reduction of security after closure activities are successfully completed and liability associated with these specific activities has been reduced. Proponents can request a security refund during operations when progressive reclamation is completed, during active closure (i.e., the period after operations end and the proponent is implementing the closure plan), or in the post-closure period. The Board’s process for considering a security refund request is the same as for any security adjustment, as described in Section 4.0.

The Boards will evaluate the closure cost estimate, based on the approved CRP, and evidence submitted by the proponent, as outlined in Section 3.1.3, and by other parties. The Boards rely heavily on the landowner’s input on closure cost estimates, and acknowledge that different landowners will have different risk tolerances, as reflected in the evidence submitted by the landowner. A request may be partially approved, approved in full, or not approved by the Board.

Commented [PT6]: Information pertaining to required documentation for progressive reclamation is now part of the Section 3.1.3.

Commented [PT7]: Please note that Section 3 is a new section. This includes content in subsections 3.1, 3.1.1, 3.1.2, and 3.1.3. This information has not been identified in track changes to improve readability.

Security refunds for closure activities such as removing buildings, pipelines, and power lines are relatively straightforward, and can be granted in full so long as associated activities have also been completed as required by the authorizations and confirmed by the Inspector. This is because the success of these closure activities can be easily verified, for example, when the infrastructure is no longer present. In this situation, there is typically no need for monitoring to verify long-term performance or for future maintenance.

However, refunds for closure activities that have long-term performance requirements, such as construction of waste rock or tailings covers, are not as straightforward. Proponents may need to monitor for years or decades to verify that closure criteria for water quality, physical stability, and more are met. Long-term maintenance may be required for site features that remain on-site, such as waste rock piles, tailings facilities, or constructed drainage channels. Some of the maintenance activities may need to be assumed to account for unplanned events or failures. For clarity, post-closure monitoring and maintenance costs are not refunded when a closure activity is first completed, since post-closure monitoring and maintenance associated with the completed closure activity have not yet been carried out.

Until closure objectives and criteria are met, there is often uncertainty about the success of closure and resultant post-closure performance. In these cases, a performance holdback may be necessary, as discussed in Section 3.1.2.

3.1 Requirements for Security Refund Requests

When submitting a security refund request to the Board, proponents must:

- Conduct a holistic re-evaluation of the closure cost estimate (Section 3.1.1);
- Estimate performance holdbacks, where applicable. (Section 3.1.2); and
- Submit documentation supporting the items above (Section 3.1.3).

These three requirements are described below.

3.1.1 Holistic Re-evaluation of the Closure Cost Estimate

When requesting a security refund, proponents are expected to consider the completion of the closure activity and the associated reduction in liability, holistically with the entirety of the development's remaining liability. The security estimate must address the remaining closure and reclamation costs for the entire development, and should be generated using the same method as used originally, with consideration for direct and indirect costs (see section 3.2).

The holistic re-evaluation of a security estimate as prepared using the RECLAIM model is carried out in two major cost categories, namely Direct Costs and Indirect Cost. Each Cost category is made up of a group of components which for mines are as listed below, and discussed further in the following sections.

- Direct Components: Open Pit; Underground Mine, Tailings Facility; Rock Pile; Buildings and Equipment; Chemical and Contaminated Soil Management; Surface and Groundwater Management; Interim Care and Maintenance, and
- Indirect Components: Mobilization/Demobilization; Post-Closure Monitoring and Maintenance; Engineering; Project Management; Health and Safety Plans/Monitoring/QA/QC; Bonding/Insurance; Contingency; Market Price Factor Adjustment.

Requests for security reductions may be associated with one or more components and result in revisions to one, or both, of the two major cost categories. Proponents are encouraged to view direct and indirect costs together as they are intimately linked. When viewed in isolation there is the potential for less security to be refunded than requested.

The following sections provide discussion of considerations for security adjustments associated with progressive reclamation during or after operations. Direct and Indirect cost categories are discussed independently below.

Direct Cost Evaluation

The submission of the Reclamation Completion Report and Performance Assessment Reports, as outlined in Section 3.1.3, should provide sufficient detail so they can be used to evaluate the work completed, and then by extension, the amount of security to be refunded. It is imperative that these submissions provide clear and tangible evidence of the completion of closure and/or reclamation activities.

If a proponent is requesting the complete refund of security associated with a particular closure or reclamation activity, then it must be adequately demonstrated that all work incorporated into the unit rate has been executed. For example, the unit cost in RECLAIM for demolition of a structure includes the removal of wastes to either an on-site landfill or an off-site disposal facility. If only the building demolition work is completed, and the waste has not been relocated to a disposal facility then the entirety of the scope of work under the RECLAIM unit rate has not been executed and the full amount cannot be claimed.

For partially completed closure activities, the proponent must either estimate the remaining closure cost or provide a percentage of completion. In either case, the proponent is expected to re-evaluate indirect costs.

Indirect Cost Evaluation

The evaluation of the Indirect Costs in the RECLAIM model includes a review of the following activities: Mobilization/Demobilization, Post Closure Monitoring, Engineering, Project Management, Health and Safety Plans/Monitoring and Quality Assurance/Quality Control, Bonding and Insurance, Contingency and Market Price Factor Adjustments. In general, the security associated with Mobilization/Demobilization

and Post Closure Monitoring and Maintenance activities are developed using unit rates within the RECLAIM model while the balance of the activities is based on a percentage assigned as a function of the Direct Costs. Additional detail on how Indirect Costs are evaluated is provided below. The reader is also encouraged to review the latest version of the RECLAIM User Manual.

Mobilization/Demobilization

Re-evaluation of the security for mobilization and demobilization needs to consider the equipment, labour and materials required to complete the balance of the closure and/or reclamation work as outlined in the CRP. At the time a proponent wishes to reduce the security for this work, consideration must be given to the work schedule moving forward and the nature of remaining closure activities. The assumptions used in the original security estimate may no longer be valid and as such the amount of security may be greater than originally thought at the outset of the closure planning. For example, if the assumption in the development of the existing security estimate was that all the earthworks for the closure of the waste rock stockpiles or tailings containment structures could be done in one field season, but a second season is required potentially at some point in the future, then the costs for mobilizing the resource necessary (i.e. equipment, labour and materials) for the second season must be accounted for in the security re-evaluation.

Post Closure Monitoring and Maintenance

Evaluation of the post closure monitoring and maintenance program (i.e. long term monitoring and maintenance costs) needs to be done on the basis of the assumptions used in the development of the land use permits, water licence, and CRP¹⁵. The security will need to be evaluated on the basis of post closure monitoring and maintenance as well as the results to confirm they are in line with objectives and criteria specified in the CRP. The amount of security will need to be reflective of any changes to the post-closure monitoring and maintenance activities, as outlined in any updated CRP. Furthermore, the proponent will need to review the level of performance uncertainty based on the post closure monitoring results and assign a value to the work that may be required to address reclamation and closure design performance. Typically, this will relate to closure works associated with tailings containment areas and waste rock storage facilities where metal leaching or other acid rock drainage concerns may not come to light until well after the reclamation and closure activities have been completed. More details on performance uncertainty is provided in Section 3.1.2.

The proponent can still reduce the overall security as outlined in Section 3.3 for work completed; however, sufficient security must be held back in order to ensure all monitoring work can be achieved. During implementation of the post-closure monitoring, the total security for the project may also be adjusted to include any new issues as they may arise during the post closure monitoring.

¹⁵ Other types of monitoring are also required in the monitoring and maintenance tab outside of performance monitoring. Examples include Aquatic Effects Monitoring Programs, wildlife monitoring, air monitoring, geotechnical inspections, Surveillance Network Program, etc.

Engineering, Project Management, Health and Safety Plans/Monitoring and Quality Assurance/Quality Control, Bonding, and Insurance

The evaluation of Engineering, Project Management, Health and Safety, Bonding, and Insurance in the RECLAIM model is based on a percentage of the Direct Cost. In general, the percentage for each of the above named Indirect Costs is evaluated separately and relates to the nature of the work remaining as part of the CRP. Engineering Costs may reduce as part of reductions in uncertainty as the development's life cycle matures or as portions are closed and reclaimed; the costs associated with preparing the engineering designs for the CRP become less. Any changes to the CRP however will result in a re-evaluation of the percentage of Direct Costs associated with this work. Similarly, for Project Management and Health and Safety costs, as the CRP is executed the complexity of the oversight necessary generally diminishes and the percentage assigned may be reduced thus reducing the security for this work. Bonding and insurance are related to the work remaining to be done which will change as the CRP is executed.

Contingency

The RECLAIM User Manual indicates the following:

contingency is added to cover both the uncertainty in the costing estimate (i.e. variability in quantity of work, Unit Costs and required scope of activities) and the possibility that some aspects of the closure and reclamation activities may be more difficult to perform.

The amount of security held as contingency is normally a function of the status of the project and the maturity of the CRP and comparison of the collected operational and field data to the model used to develop the security estimate. The contingency amounts are calculated as a percentage of the estimated Direct Costs of the various line items and reflect the uncertainty associated with quantities and the possibility some elements of the CRP may be difficult to execute. The less risk the lower the percentage of Direct Costs is required to cover any potential issues that may arise during the execution of the CRP. The contingency (based on the percentage of Direct Costs in RECLAIM) may drop when the mine moves from construction into operation or when the operational phase transitions to closure as the ore deposit gradually becomes mined out.

This amount of security is not associated with the performance of the reclamation and closure works in the long-term but rather is associated solely with the design and execution of the reclamation and closure works. For details on security related to the performance of the reclamation and closure works (i.e. performance uncertainty) see Section 3.1.2.

Note, in the RECLAIM model contingency amounts are associated with the yet to be completed closure activities. Any contingency associated with completed works are in effect removed from the re-evaluated security as the contingency security is calculated on the basis of the remaining Direct Costs.

3.1.2 Performance Holdbacks

A performance holdback is an amount of security that is not refunded until a proponent can demonstrate that performance-based closure objectives and criteria have been met. In general, it is a portion of the

security that remains once the security associated with completed closure or reclamation activities are refunded. The INAC [2002] Reclamation Policy addresses security holdbacks:

The Minister may hold back an appropriate amount of financial assurance to cover future requirements for the site. In such cases, the mining company will be responsible for the care and maintenance of the site but will also maintain a claim to any remaining financial assurance.

A performance holdback is evaluated based on a closure activity being completed as confirmed by the documentation requirements in section 3.1.2.

The RECLAIM model or manual does not include an amount associated with performance uncertainty. This concept will need to be included when a request for refund is submitted when closure of a component is complete, either progressively or at closure. Detail on how to evaluate performance uncertainty are outlined below.

Performance Uncertainty and Associated Holdback

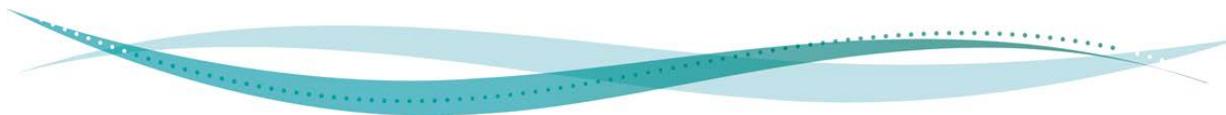
Performance uncertainty is separate from the RECLAIM model's evaluation of contingency. Performance uncertainty relates to the potential for closure and reclamation activities not achieving closure objectives or criteria. This is associated with the inherent risks in the design assumptions. For example, if the design of the tailing's containment structure has been modelled to have frozen tailings to mitigate the potential for metal leaching, what is the risk to the surrounding area if the tailings are not frozen within the modelled period and what is the cost to undertake the closure and reclamation measures to mitigate this risk. It is anticipated that for existing water licences this concept will be added into the security evaluation as part of future security adjustments and refund requests. It is expected that calculations for performance uncertainty will either be based on a percentage of the latest Direct Cost items, or based on a detailed evaluation of the potential uncertainty on all applicable CRP line items in the RECLAIM model. Note the level of uncertainty may or may not change through the period of progressive reclamation and subsequent post-closure years (i.e. the years following closure will depend on the component).

In a RECLAIM estimate, the Direct Cost items have different levels of performance uncertainty. Some components have zero, or near zero, uncertainty (e.g. buildings and equipment) while others have much higher levels of uncertainty (e.g. tailings containment structures and waste rock storage facilities) as the level of risk between the different components is inherently different. In evaluating the performance uncertainty of closure and reclamation activities, the party preparing the estimate must consider the ramifications/consequences of the activities not performing as planned within the context of the project's setting and the sensitivity of the local and regional environment. In other words, there has to be a balance between the hazards associated with an activity against the consequences of a failure in the reclamation and closure design. This evaluation will be done on a case-by-case basis as closure and reclamation activities are completed. Table 1 identifies holdbacks related to performance uncertainty by the main components of the RECLAIM model based on the maturity of mine closure design. These are expressed as a range of percentages that represent the aggregate costs related to performance uncertainty in the

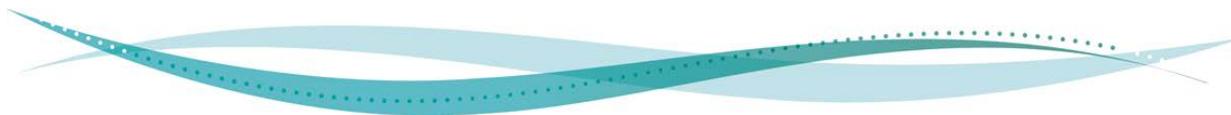
Direct Cost Item. These percentages can be used by proponents to estimate holdbacks for performance uncertainty, so long as supporting rationale is provided. Proponents may also provide a detailed cost estimate for performance uncertainty. It should be noted that the Boards may not agree or support the proponents estimate or evaluation of performance uncertainty and may elect to use a more conservative approach when evaluating.

Table 1: RECLAIM Direct Cost Items and Holdbacks for Performance Uncertainty

Direct Cost Item	Holdback	Rationale
Open Pit (Physical)	0 to 5%	In general, it is anticipated performance uncertainty related to this Direct Cost item would be minimal (e.g., physical stability and Hazard Mitigation) unless there are concerns related to the overburden performance at the top of the open pit or pit flooding has resulted in some potential issues for the downstream water bodies which may require alterations to the design provided in the interim or final reclamation and closure plan. It is anticipated if water treatment concerns arise due to acid rock drainage in the post-closure period the performance uncertainty would be associated with the Water Treatment component below and not the Open Pit calculation of performance holdback (i.e. Open Pit (Chemical)).
Underground Mine	0 to 5%	In general, it is anticipated the level of uncertainty for this reclamation and closure works is low. A range has been provided to give the reviewer the option to assign some performance uncertainty on the basis of the site conditions and requirements.
Tailings	20 to 50%	<p>Reclamation work associated with the capping of tailings containment areas and performance of the cover and/or freezing of the tailings holds one of the highest performance risk issues. The costs associated with mitigating a previously closed tailings containment areas due to design assumptions not being realized (i.e. leaching of metals decades post-closure) are significant and as such it is imperative that there is a considerable holdback to guard against future closure costs.</p> <p>The lower end of the percentage range would be anticipated for sites located in areas where the geology of the site is more favourable (i.e. less potential for acid rock drainage concerns) whereas sites with complex or less favourable geology (i.e. high potential for acid rock drainage concerns) would have a higher level of performance uncertainty and thus it would be expected the performance holdback requirements would be higher.</p> <p>Similar to the open pit, any uncertainty related to water treatment as a function of performance issues with the</p>

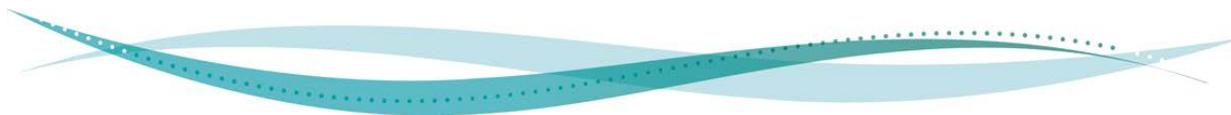


Direct Cost Item	Holdback	Rationale
		<p>tailings management program will be included in item Water Treatment below and not in the Tailings calculation of performance holdback.</p> <p>Another example of a performance risk or uncertainty relates to the potential for a failure of any perimeter and internal dams within the tailings containment areas. It is anticipated that the level of risk would be low and that it would have a low level of uncertainty, however, some security may be required to address future maintenance concerns.</p> <p>Given the nature of the mitigation measures that may be required to address performance issues to the tailings containment areas, consideration must also be given to the mobilization of labour, supplies and equipment as well as management of a camp. Depending on the mine site location, this may require the construction of a winter road or use of barges to remobilize the appropriate equipment for the rehabilitation work.</p>
Rock Pile	20 to 50%	<p>Similar to the risks associated with the performance of tailings containment areas, the long-term performance of waste rock piles and the potential of metal leaching in the future presents one of the high-risk issues. Given the long time periods which may pass before any metal leaching is reporting during post-closure monitoring and the costs associated with rehabilitating the waste rock storage facility covers, it is imperative that a holdback is retained to protect against future closure costs. As with the Tailings component, the percentage range used to evaluate the anticipated costs associated with the performance holdback relate primarily to the site geology where less complex and more favourable geologies are expected to have low risk of performance failures whereas more complex geologies will have higher risk and thus more potential for performance failures.</p> <p>Any water treatment issues that may arise from the failure of the waste rock containment structures would be captured under the Water Treatment component below.</p>
Chemicals	0 to 30%	The removal of hazardous chemicals associated with mine operations can generally be easily evaluated as part of



Direct Cost Item	Holdback	Rationale
		mine closure works except for work associated with the landfarming of petroleum hydrocarbon impacted soils and waste rock. The level of uncertainty associated with these direct costs are a function of the method selected by the mine proponent to mitigate issues associated with the management of chemically hazardous materials. If a landfarm is to be used there is the potential for a portion of the hydrocarbon impacted materials to not be adequately treated and as such an alternative plan is required to mitigate this liability. It is anticipated uncertainty related to the management of residual fuels, batteries, reagents, etc. will have a performance uncertainty of zero percent (i.e. they are assumed to be removed off-site).
Buildings and Equipment	0%	The removal and disposal of mine site infrastructure is considered routine, and any risks associated with the removal of site infrastructure are well understood by the industry. For this reason, no performance uncertainty needs to be assisted to this Direct Cost item.
Water Management	0 to 20%	In general, the decommissioning of water management structures such as berms and containment ponds is straight forward and requires little to no performance uncertainty security. The concerns are associated with the repairs and maintenance of these structures during the active closure and post-closure periods, in particular the latter. Once all equipment has been demobilized from site the costs associated with on-going repair and maintenance of water containment can be significant should water treatment requirements extend well into the post-closure period (i.e. after the active closure period). The costs associated with the mobilization of equipment, labour and supplies as well as operation of a camp during the mitigation of these works would be shared with other items with performance uncertainty and as such the proponent should clearly identify where security costs associated with these overall costs have been assigned within the performance uncertainty security evaluation.
Water Treatment	50 to 100%	Post-closure water treatment can be the greatest post-closure liability at the site. Water treatment infrastructure may remain present through the active closure period, and as a contingency kept for a few years into the post-closure period. It is imperative that there is sufficient security in this regard until such time as the mine operator can demonstrate the post-closure monitoring results meet closure criteria. The percentage range provided for performance uncertainty has been set high based on past experiences with legacy mine sites and metal leaching into water bodies from both tailings and waste rock storage facilities. Note costs associated with the rehabilitation

Direct Cost Item	Holdback	Rationale
		of any mine structures such as tailings covers and/or waste rock storage area caps are covered individually under items Tailings and Rock Pile, respectively.
Interim Care and Maintenance	0%	Given the interim nature of this work, performance uncertainty it is not addressed with respect to this component of the closure cost estimate.



The refunding of the security related to performance uncertainty needs to be evaluated on a case-by-case basis with the understanding that security related to performance uncertainty may remain in place for decades post-closure as a function of the modelling done in the original CRP design and the results of ongoing post-closure monitoring. It is important to remain conservative in the approach to refunding security related to performance uncertainty as the costs associated with the mitigation of these issues are often expensive requiring a full mobilization of multiple pieces of equipment, a multi-person team of operators and other personnel, as well as materials to execute the necessary rehabilitation to the underperforming reclamation and/or closure activities. Of note, costs associated with remobilization to site may need to be considered as part of any security related to performance uncertainty and while this is not linked to Direct Costs items, as a percentage of the direct costs, a case-by-case evaluation should be done particularly if the mine site in question is in a remote location where ice roads and/or barging are required.

It is recommended the performance uncertainty holdback be re-evaluated at the end of the active closure period and again every five years thereafter as a minimum so as to provide the mine proponent the opportunity to demonstrate that the post-closure monitoring results are in line with the model predictions outlined in the CRP and as such demonstrate that the level of risk associated with the respective performance uncertainty elements can be justifiably reduced. It is possible that, on the basis of monitoring results during active mining and during active closure, the performance uncertainty is reduced, thus allowing for reduction of the performance holdback amounts required.

Mine operators are expected to consider performance uncertainty for all direct components of the closure cost estimate. Refund requests will need to account for performance uncertainty when closures costs are being re-evaluated as the mine matures. Proponents may propose an alternate method for estimating holdbacks associated with performance uncertainty, so long as supporting rationale is provided. This should be discussed with the landowner or land manager as part of pre-submission engagement.

3.1.3 Required Documentation

Proponents must submit the following documentation to support a request for a security refund for completion of final or progressive reclamation:

1. An adjusted RECLAIM estimate. The estimate must reflect the holistic re-evaluation of closure costs and any performance holdbacks associated with the refund, as discussed in Sections 3.1.1 and 3.1.2
2. Documentation to describe the basis and assumptions for each adjusted line item in the new RECLAIM estimate, in accordance with the expectations outlined in Section 2.4 of this document.
3. A Reclamation Completion Report (RCR) that conforms with the MVLWB/INAC *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the NT, 2013*, including the following information:
 - a. Details, including figures and photos, of the final reclamation work;
 - b. An explanation of any work that deviated from the approved design and CRP;

- c. An inventory of the infrastructure removed and that remaining;
- d. All engineered “as-built” reports;
- e. Descriptions of any monitoring that is still required; and
- f. A preliminary assessment on the achievement, or lack thereof, of appropriate closure objectives and criteria.
- g. A conformance table identifying where each requirement (a through f) is met.

Refund requests will be reviewed in conjunction with the RCR based on whether the completed activity has reduced the project’s liability. If the RCR identifies significant deficiencies in the completed work (for example cover material was not placed to its specifications), the Boards will consider the extent to which these deficiencies may impact post-closure performance, and may not grant the security refund or grant only a partial refund.

When closure activities span many years (for example, building a tailings cover), proponents may wish to request several partial refunds, for example, once every two years until the work is complete. In that case, the proponents will need to submit an RCR with each refund request. In addition, water licences typically require the proponent to submit a single final RCR once the closure activity is complete.

- 4. A Performance Assessment Report, once there is enough monitoring data to demonstrate whether closure objectives have been met. Typically, it is not possible to submit a PAR for completion of progressive reclamation because the proponent has not yet monitored or established success. PARs may require years of monitoring to determine success. For more information about Performance Assessment Reports, see the MVLWB/INAC *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the NT*, 2013.¹⁶
- 5. Any other documentation to support the request for a security refund.

Commented [PT8]: This concludes the new section.

¹⁶ See mvlwb.ca for MVLWB/INAC (2013) *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*.

4.0 Boards' Processes for Setting Security

This section presents an overview of the Boards' processes for determining the security deposit for a project. The Guidelines describe two distinct processes for setting security.

Section [4.1](#) discusses the process for setting security during a licensing proceeding. During a water licensing proceeding, it is common for the Boards to also consider a land use permit application for the project. The Board will set an initial security deposit when it first issues a water licence and land use permit for a new mining or advanced exploration project. The Boards issue these authorizations for a term of several years.¹⁷

During the term of the water licence, the Boards may adjust the security deposit under the water licence [and land use permit](#).¹⁸ Section [4.2](#) presents the process for adjusting the security deposit for a project during the term of the licence.

¹⁷ The maximum term of a land use permit is 5 years, with a one-time opportunity to renew for two additional years; the term of a Water licence is often longer and the duration is different for each project.

¹⁸ During the term of a land use permit, the only way to adjust the security deposit is to amend the permit. An amendment to a permit can only be requested by the proponent. The only other time the Board can adjust security during the term of a land use permit is if it is being assigned to a new proponent.

4.1 Setting Security during Licencing

A licencing proceeding is conducted in accordance with the Boards' Rules of Procedure,¹⁹ the *Waters Act*, and the MVRMA, whenever a proponent applies for a new licence, a licence renewal, or a licence amendment.

A proceeding includes opportunities for reviewers to provide input or ask questions directly of the proponent, and for the proponent to respond to questions and recommendations from reviewers.

Figure 1 (below) depicts the steps within a licence proceeding involving a public hearing to illustrate when reviewers and the proponent provide input on a closure cost estimate.

At the end of the proceeding, the Board sets the security deposit based on all the information provided during the proceeding and includes this value in the water licence (and potentially in a land use permit, if one is being issued). Type B water licences for which a public hearing is held, and all type A water licences, are sent to the appropriate Minister for approval.²⁰ The Board prepares Reasons for Decision whenever issuing a water licence or land use permit. The Reasons for Decision will include an explanation of decisions related to the security deposit.

The Role of [Landowners and Land Managers](#)

[When a project is on land owned by an Indigenous Government, companies may need authorizations from the Indigenous Government. These authorizations may have requirements for closure and reclamation and may require security.](#)

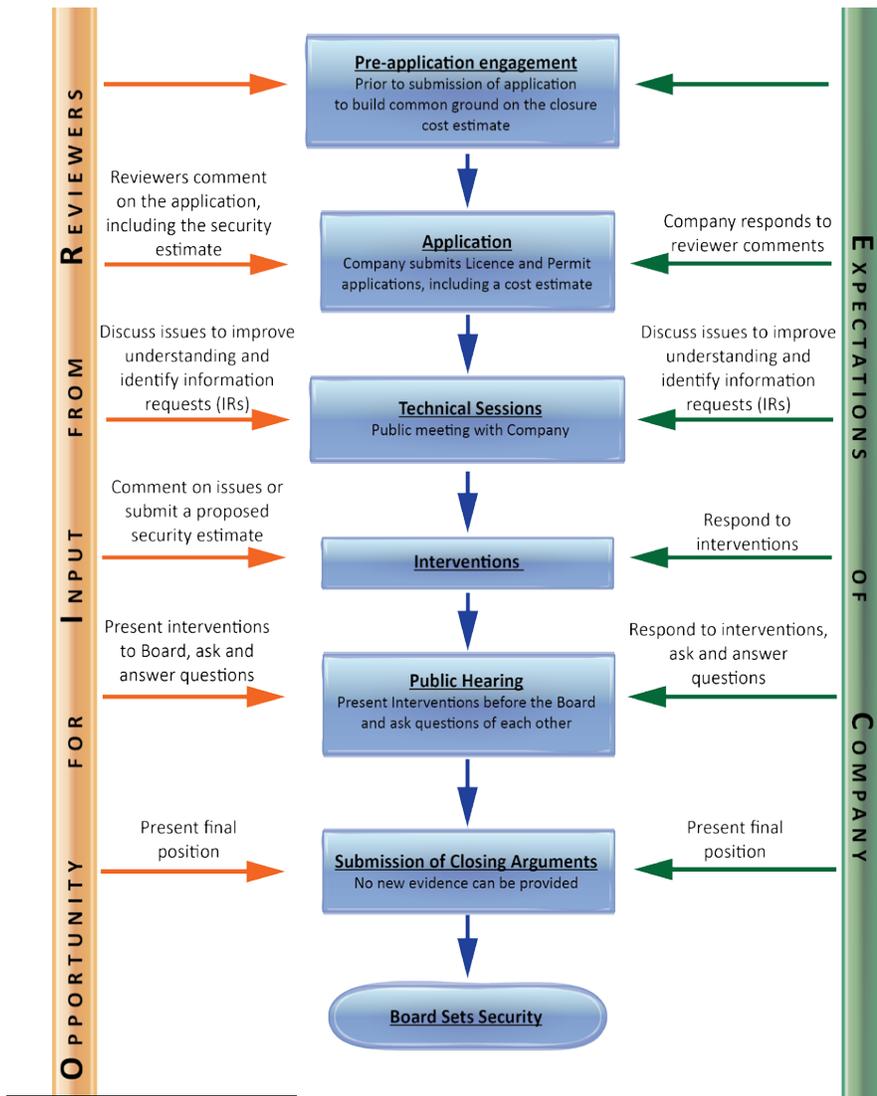
[The GNWT and CIRNAC](#) are the authorities responsible for approving Type A water licences, [Type B water licences for which a hearing is held](#), setting the form of security, holding security, and ultimately for paying for the closure and reclamation of abandoned mine sites on federal and non-federal areas (respectively). Therefore, the GNWT and [CIRNAC](#) play a central role in estimating closure costs. They also act as reviewers, providing expert advice and closure cost estimates during the Boards' processes for setting security.

[The GNWT and CIRNAC](#) are responsible for keeping the RECLAIM model current by periodically releasing updates that [reflect](#) inflation, [updated](#) unit costs, and best practices in closure cost estimation.

¹⁹ The Rules of Procedure can be found under "Resources - Policies and Guidelines" at mvlwb.ca.

²⁰ As per subsection 47(2) of the *Waters Act* and subsection 72.18(2) of the MVRMA.

Figure 1: Example of Board Process for Setting Security During a Licence Proceeding²¹



²¹ Please note: This figure does not include all the steps of a licence proceeding; its purpose is to depict the steps within the licence proceeding when reviewers are able to provide input on a closure cost estimate and when the proponent is able to respond, prior to the Board setting the security deposit for the project. The orange arrows identify where reviewers have the opportunity to provide input and the green arrows represent where the proponent has the opportunity to respond to reviewers. Should a reviewer wish to submit a closure cost estimate, they have the opportunity to do so within the timelines of the proceeding.

4.2 Adjusting Security during the Term of a Licence

During the term of a water licence, the Board may adjust the closure cost estimate to ensure the amount of the security deposit continues to reflect the costs to close and reclaim the project. Typically, the process for adjusting security [during the term of the licence](#) is different than during [licensing](#) (as described in section 4.1). The timing of security adjustments is often directly linked to the closure planning process and is determined on a case-by-case basis.

Whether an adjustment to a closure cost estimate is warranted may be determined by:

- a) Licence conditions; some licences have conditions that address the timing of security adjustments.
- b) The amount of time that has passed since the security deposit for a licence was set or last adjusted; adjustments that are too frequent may place an unnecessary burden on the resources of the Boards, the proponent, the landowner, government, and reviewers; adjustments that are too infrequent can result in a security deposit that no longer reflects the estimated costs to close and reclaim the project.
- c) The information presented in the Closure and Reclamation Plan Progress Report;²² each progress report includes “a list of any factors that would influence an increase or decrease in the total reclamation liability next time an updated estimate is required”²³ (e.g., evidence may be presented that the proponent has completed progressive reclamation).
- d) Any requests made by the proponent or other parties to adjust licence security (e.g., the proponent has proposed changes to the CRP). [Note: any requests for adjustment to the security deposit should be accompanied by a detailed description of the proposed change, a rationale for the change, and supporting documentation \(see section 2.4\).](#)
- e) Whether there has been an adjustment to the RECLAIM model since the Board last set security for the project or whether the estimate requires adjustment for inflation.
- f) Whether there is an upcoming licence renewal or amendment.
- g) Other considerations specific to the project or circumstance.

Commented [PT9]: This information has been relocated to the documentation section.

Most often, the Board relies on the information the proponent provides in the Closure and Reclamation Plan Progress Reports to decide whether an adjustment to the closure cost estimate is appropriate (item (c) in the list above).

The Boards will conduct a public review of proposed adjustments to a closure cost estimate (Figure 2). The public review process allows any party to submit written comments on the closure cost estimate, and the proponent is then provided an opportunity to respond in writing.²⁴ The Board makes a final decision regarding any adjustments to the closure cost estimate based on the information provided during the

²² For more information on requirements for Closure and Reclamation Plan Progress Reports, see the MVLWB/INAC (2013) *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*.

²³ *Ibid.* p. 25.

²⁴ The Boards have the option to hold a public hearing, even if it is not required by the legislation (sections 24 and 72.15 of the MVRMA).

review period. The Board will provide [reasons for decision](#) for security adjustments.

Figure 2: Example of Board Process for Adjusting Security During the Term of a Licence



Should the term of the licence end before the end of project life, the proponent must apply to renew its water licence. The Board may adjust the security deposit again in issuance of the renewed licence. Whether or not a proponent is required to submit an adjusted closure cost estimate during licence renewals depends on a number of factors. For example, the Board will likely require a new closure cost estimate during a renewal if a new version of RECLAIM was recently released by the GNWT or to reflect the status of progressive reclamation. In addition, should a proponent wish to apply for an amendment to the existing licence (i.e., a change in the requirements of the licence), the security deposit may be adjusted depending on whether the proposed amendment will affect the closure cost estimate.

Review of security adjustments during licence renewals or licence amendments follows the process outlined in Figure 1 (not Figure 2). Proponents are strongly encouraged to contact Board staff prior to submitting a renewal or amendment application to discuss the need to include an adjusted closure cost estimate.

In all cases, whether security is being set for the first time, adjusted during the term of the licence, or adjusted during a renewal or an amendment, the Boards allow for public input and ensures the process is inclusive, fair, and transparent. The proponent is always provided an opportunity to respond to information submitted by reviewers, prior to consideration by the Board.

4.3 Determining the Security Deposit

The security deposit reflects the amount of the Board's closure cost estimate. Once the Board determines the closure cost estimate for a new water licence or land use permit, or determines the adjustment to an existing closure cost estimate, the Board will make a decision with reasons. The Board writes the amount of the security deposit into a schedule attached to the water licence or into a condition in the land use permit. In the case of an adjustment to the water licence security deposit, the Board will update the appropriate water licence schedule.²⁵ If necessary, the Board will [ensure the Board's decision is reflected in an updated RECLAIM spreadsheet](#), and post the spreadsheet on the public registry.

The proponent must [provide](#) the required security deposit(s) with the GNWT (or [CIRNAC](#) on federal areas). Timelines for [providing](#) a security deposit may be outlined within the water licence or land use permit (e.g., security is to be [provided](#) prior to commencement of construction, etc.). The Boards may include a series of phased payments in the licence based on project milestones (see section 2.4.2).

The RECLAIM model allows the user to divide each line item into land-related vs water-related liability. Based on this split, the Boards may use their discretion to determine how to allocate security between authorizations (licences and permits related to the project).

4.4 Preventing Duplication

The Boards may reduce security in a land use permit or water licence by an amount held under another regulatory authorization for the same project to prevent duplication. For example, if the GNWT holds security under a land lease, a proponent may request that security in the water licence or land use permit reflect this, should security be held for the same purposes/activities. To grant such a request, the Board requires agreement from the [landowner or land manager](#) (or other authority, depending on the authorization), proof that the security is [provided](#) elsewhere, and documentation to demonstrate that the amount held under the other authorization (the land lease in this example) is for costs required to implement aspects of the closure and reclamation plan.

²⁵ Refer to footnote 20 for more information regarding adjustments to land use permit security deposits.