



August 21, 2018

Dear Sir/Madam,

**Re: Request for Review of 2<sup>nd</sup> Draft *Guidelines for Aquatic Effects Monitoring Programs***

On December 1, 2017, the Land and Water Boards (LWBs) of the Mackenzie Valley in collaboration with the Government of the Northwest Territories - Environment and Natural Resources (ENR), distributed draft Guidelines for Aquatic Effects Monitoring Programs (the Guidelines) for review and comment. The comment period closed on February 28, 2018. Fourteen reviewers representing industry, government, co-management boards, and independent agencies submitted almost 200 comments on the draft Guidelines.

The overall tone of the comments received was positive, with several reviewers remarking that the Guidelines would help provide greater clarity and certainty in the development and implementation of AEMPs. Other reviewers expressed their appreciation for having joint LWB/ENR Guidelines, noting that this would likely increase the consistency of requirements for proponents with respect to AEMPs. Reviewers have also provided a number of insightful suggestions to improve the Guidelines. In some cases, reviewer comments or questions highlighted areas where either the Guidelines or the AEMP process are confusing or less than effective; others expressed concerns about the implications of aspects of the Guidelines' content.

Since February 28, 2018, LWB/ENR staff have reviewed all of the comments and considered how best to use the information to improve the Guidelines. Attached to this letter is Draft 2 of the Guidelines. The most substantial changes made in this new version were to the requirements and description of the Response Framework.

Changes to the Guidelines since the last version distributed in November 2017 can be summarized as follows:

- **Introduction:** Minor clarifications were made in the text of the Purpose, Authority, and Application sub-sections.
- **Part 1, AEMP Requirements:** Edits were made to shorten some sub-sections. The language in sub-section 1.1.3, AEMP objectives, was clarified with respect to the assessment of cumulative effects and to better distinguish the term "effects" from the term "impact". Edits have been made in section 1.2 (regarding regulatory AEMP submissions) to accommodate the changes made to the Response Framework requirements. Other minor changes in language can be found in sub-section 1.3.3.
- **Part 2, Recommended Approaches to AEMP Design and Implementation:** In addition to some minor clarifying edits, several reviewer suggestions regarding engagement were inserted. Edits were also made to sections 2.2 and 2.3 to accommodate the changes made to the Response Framework.

- Part 3, Development of a Response Framework: While reviewers did not express any concerns with the intent and utility of Response Frameworks in AEMPs, the large number of comments, questions, and suggestions received indicated the need for major changes for this part of the Guidelines. It was because of the more substantial changes proposed for Part 3 that it was decided that another round of review comments was necessary before finalizing the Guidelines. See Table 1, below, for additional rationale on changes to the Response Framework.
- Appendix 1, Template for AEMP Design Plan: Only very minor edits were made to the Appendix.

To ensure transparency in the edits made to the Draft Guidelines, responses to each reviewer comment have been provided in the attached excel spreadsheet. Additionally, overarching themes from the comments and additional explanation as to how concerns were or were not further addressed in Draft 2 of the Guidelines, are provided in Table 1 below.

LWB/ENR staff are available to meet with reviewers during the review period to provide greater clarity for the content of the Draft Guidelines and to help inform the next set of reviewer comments and recommendations. If interested, please contact Dr. Kathleen Racher at [kracher40@gmail.com](mailto:kracher40@gmail.com) to set up a meeting with your organization.

Sincerely,

Land and Water Boards of the Mackenzie Valley  
Government of the Northwest Territories – Department of Environment and Natural Resources

**TABLE 1: Overarching Themes of Reviewer Comments on Draft 1 of the Guidelines.**

#	Theme	Description of comments or concerns	LWB/ENR rationale or response
<b>General Comments and Concerns</b>			
1	Level of technical detail	There were varying opinions on how much technical detail should be included in these Guidelines. Some reviewers suggested including, for example, how AEMPs would work for temporary closure scenarios, more details on how AEMPs will vary over different project phases, a detailed list of what “best professional standards” are, how to specifically address cumulative effects, which ecological indicators to monitor, etc.	The Guidelines are meant to be applicable to a wide variety of project types, all operating in very different receiving environments. As it is not possible to provide specific details for each potential project, the Guidelines only contain information that is likely applicable to most projects requiring an AEMP. As reiterated throughout the Guidelines, the Board will set the specific AEMP requirements for each project based on the evidence available on a case-by-case basis. Proponents and affected parties who wish to discuss project-specific details of their AEMPs should speak to staff at the LWBs directly.
2	Relationship of these Guidelines to the 2009 INAC Guidelines for AEMPs	Several reviewers were confused about the exact relationship between these Guidelines and guidance published by INAC in 2009 entitled “Guidelines for the Design and Implementation of AEMPs for Development Projects in the Northwest Territories.”	To be clear, proponents should use these joint GNWT/Board Guidelines to guide the development of an AEMP for a water licence in the Mackenzie Valley. As the INAC 2009 guidance documents provide a great deal of useful technical advice for the development of an AEMP in the north, references to that guidance are provided in the GNWT/Board Guidelines. Proponents are not, however, required to use the INAC 2009 Guidelines if they do not wish to.
	Mandatory Requirement for an AEMP in a Type A Water Licence	Some reviewers did not believe that AEMPs should be mandatory for “mining/milling and oil/gas production undertakings that require a Type “A” water licence”, as is stated in the Application section of the draft	With respect to the example that some projects with a Type “A” water licence are not predicted to cause aquatic effects, LWB/ENR staff recognize that this may be true but that sometimes AEMPs are put in place in a water licence to confirm those predictions because uncertainty is inherent in any prediction. Furthermore, and based on experience, all current Type “A” water licences issued by the Boards for mining/milling and oil/gas production in the NWT

		<p>Guidelines. For example, there could be examples where such projects are not predicted to cause aquatic effects.</p>	<p>have been required, to have an AEMP or similar monitoring program. Although there can be exceptions based on evidence for a specific project, the LWB staff and ENR staff believe those exceptions will be rare. In the vein of wanting the Guidelines to present the “normal” process for AEMPs, LWB staff/ENR propose to leave these statements as they are now. The risk with presenting alternative possibilities in the Guidelines is that proponents may not anticipate needing an AEMP and may not do the baseline or other work necessary to design an AEMP prior to submitting their water licence application, resulting ultimately in project delays. Finally, it is important to note that, in the end, proponents must only comply with the conditions of their water licence. If a proponent believes that their mining/milling or oil/gas production project should not have an AEMP requirement in its water licence, then the proponent can provide the necessary evidence and make their case to the Board.</p>
3	<p>Detailed Criteria for when an AEMP is required in a water licence</p>	<p>Several reviewers indicated that there was too much ambiguity with respect to the criteria for when an AEMP will be required in a water licence. There were suggestions to provide detailed criteria to help proponents “self-select” whether they would require an AEMP for their project or not.</p>	<p>In the Application section, it states that “AEMPs will be required for mining/milling and oil/gas production undertakings that require a Type “A” water licence. AEMPs may also be required for other undertakings based on the specific project activities.” Section 1.1.1, repeats that assertion and further describes the general reasons why a project would require an AEMP, such as when there is direct or indirect waste discharge to water and/or when project-related effects to the aquatic environment can be reasonably expected.</p> <p>Given the wide variety of projects requiring water licences, it is not possible to produce an exhaustive list of circumstances for when AEMPs would be required outside of mining/milling and oil/gas operations requiring a Type “A” licence. If the Guidelines were to present a non-exhaustive list, proponents might believe that if their specific circumstances were not on the list then it automatically doesn’t require one when, in fact, the Boards will decide on a case-by-case basis. For this reason, no additional criteria have been listed in the Guidelines. Proponents are encouraged to speak to LWB staff to discuss the specific needs of their projects well in advance of submitting a water licence application.</p>

4	Harmonization of EEM and AEMP requirements	Some reviewers appreciated that the Guidelines formally acknowledged that the Board would consider harmonizing EEM and AEMP requirements but still wanted additional details as to how this would work in practice. Reviewers noted that this was especially important given the upcoming changes to the MMER to include diamond mines. At least one reviewer suggested that these Guidelines should be put on hold until the federal process is completed.	LWB staff /ENR are aware of the plan to have the regulations (including the Environmental Effects Monitoring (EEM) requirements) apply to diamond mines. Although the Board has acknowledged that harmonizing EEM and AEMP requirements to the extent practical is a preferred approach (see Section 1.3.4 of the Guidelines), it is important to note that the two programs have different overall objectives. For example, while the EEM is intended to gather information to ensure the national MMER is working as intended, AEMPs are intended only to look at site-specific effects of individual projects. Therefore, it cannot be assumed that these two requirements would completely overlap for a given project. Furthermore, the Boards have already allowed metal mine proponents to harmonize their EEM requirements with AEMPs for existing projects in the NWT and there is no reason to believe that the EEM requirements for diamond mines will be different than for metal mines. For these reasons, LWB staff /ENR do not see the need to wait for the federal process to conclude. As stated in section 1.3.4 of the Guidelines, the Boards expect proponents to propose how best to integrate monitoring requirements from other authorizations into the AEMP and the requests will be considered on a case-by-case basis.
5	How application of the Guidelines may affect existing AEMPs	Some proponents who already have AEMPs in place were concerned about what would happen if their existing AEMPs did not match the requirements in the Guidelines.	There is no intention to negatively affect existing AEMPs. Instead, the disclaimer in the Application section of the Guidelines, that states the Guidelines "may apply to existing licences" means that AEMPs that are being modified or introduced for an existing licence should review the new Guidelines and make best efforts to meet their intent. Also, it is important to note that introduction of these Guidelines will not cause the AEMP conditions of existing water licences to change automatically. Proponents cannot be found in contravention of their licence by not following a guideline, but rather if conditions in their licence are not met.
6	Regulatory burden for proponents	Some reviewers were concerned that some of the requirements described in the Guidelines were going to increase the regulatory burden for proponents. Specific concerns were expressed, for	It is important to note that, for the most part, the Guidelines are only documenting current practice with respect to AEMPs. There was no intention of increasing the regulatory burden for proponents, only to clarify those expectations that already exist. For example, engagement is a requirement of preparing for any project that is

		example, about the level of engagement required, the need for cumulative effects monitoring, requirements for the use of “best professional practices”, or that monitoring is required in perpetuity.	subject to licensing; specific engagement for AEMPs has long been considered best practice since AEMP results are a very important way for stakeholders to understand impacts during the life of the project. Changes to the Response Framework, as documented in Draft 2 of the Guidelines, were intended to reduce the regulatory burden of proponents. Specific concerns raised by reviewers have been addressed in the attached table of responses.
<b>Response Framework Comments/Concerns</b>			
7	Action Level Descriptions	There were a number of comments for how Action Levels could or should be set in a Response Framework. A number of suggestions were received for additional details and considerations for Action Levels to include in Part 3 of the Guidelines. Other comments or concerns were raised about the descriptions provided in Draft 1 of the Guidelines; in these cases, reviewers described all the ways in which the requirements/ideas presented did not apply to their specific project.	Reviewers provided a number of insightful suggestions regarding the setting of Action Levels based on their own experiences over the past several years. Although all of these suggestions might be helpful in the context of specific kinds of projects in specific receiving environments, LWB staff /ENR concluded that the suggestions did not all have general applicability. As well, LWB staff /ENR realized through still other comments that the descriptions originally provided in Draft 1 of the Guidelines were either not well understood or did not have general applicability. For this reason, the description of considerations for setting Action Levels has been significantly reduced in Draft 2 of the Guidelines. See Table 5 in Section 3.2.2 for the more generic description of what actions are appropriate for each type of Action Level exceedance. Proponents will have to define Action Levels that fit with the actions defined in Table 5. The Boards will still approve Action Levels based on evidence provided on a case-by-case basis.
8	Process after exceedance of a Low Action Level	Some reviewers asked for more guidance on the repeated triggering of the Low Action Level and questioned if the level was being triggered too soon.	LWB staff /ENR also have concerns about the effectiveness of the current process around the exceedance of a Low Action Level. Staff note that there is a high regulatory and administrative burden on proponents, reviewers, and the Board itself when Low Action Levels are exceeded, even though there may be little ecological significance to the exceedance itself. Based on these experiences, substantive changes have been made to the requirements of the Response Framework: <ul style="list-style-type: none"> <li>- Exceedance of a Low Action Level will no longer trigger the requirement for a Response Plan; instead, proponents can report the</li> </ul>

			<p>Low Level exceedance in the AEMP Annual Report. Moderate and High Level exceedances will still require a Response Plan.</p> <ul style="list-style-type: none"> <li>- Low, Moderate and High Action Levels will need to be set in the initial Response Framework. Formerly, it was only required to set the Low Level; however, experience has shown that the lack of a Moderate or High Level causes reviewers to be overly concerned with process after a Low Level exceedance. For example, in the absence of knowing where the next level was, reviewers remained concerned about ecological implications of the Low Level exceedance and, consequently, asked for a lot of additional follow-up studies. LWB staff/ENR believe that if the Moderate Level was known in those cases, reviewers would not have spent as much time determining what to do after a Low exceedance.</li> <li>- With the understanding that Moderate and High Action Levels are more complex to set, LWB staff /ENR anticipate that changes to those levels may be necessary after a Low exceedance and this has been noted in Section 3.2 - 3.4 of Draft 2 of the Guidelines.</li> <li>- To compensate for the lack of a Response Plan after a Low Action Level exceedance, proponents will be required to implement the list of project-specific "minimum actions" as approved in the initial Response Framework.</li> </ul>
9	Follow up actions following Action Level exceedance	A reviewer noted that Draft 1 of the Guidelines emphasized that responses to Action Level exceedances should only occur after approval of a Response Plan. Due to the review and approval process, this could mean that there can be a significant lapse in time between an Action Level exceedance and action. Other reviewers were concerned that after a Low Level exceedance, further changes to the environment could occur swiftly or unexpectedly and it was	LWB staff /ENR agreed with these concerns and, to meet this and other issues with the Response Framework, the requirements have been changed such that a list of "minimum actions" for each Action Level exceedance will be approved in the AEMP Design Document. Proponents will be required to implement those minimum actions as soon as they detect an Action Level exceedance. Although a Response Plan will no longer be necessary for a Low Action Level exceedance, Response Plans for Moderate and High Action Levels may still identify actions, above the minimum actions approved in the Response Framework, that the proponent will need to implement after approval of the Response Plan.

		unclear if the process would be able to respond appropriately.	
10	Use of CCME Guidelines	Some concerns were raised by reviewers that interpreted wording in Part 3 as saying that Action Levels should be set equal to CCME Guideline values for the protection of aquatic life.	Although the original Guidelines did not specifically require Action Levels to be set equal to CCME Guidelines, this concern is now moot as all references to the CCME Guidelines have been removed.