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MEMO

TO	Derek Donald, Erin Crawford Burgundy Diamond Mines Ltd.
FROM	Adam Chateauvert, Leanne Elchyshyn, Sarah Dando, Madison Jerhoff, Roberta Pedlar-Hobbs ERM Consultants Canada Ltd.
DATE	January 30, 2024
REFERENCE	Ekati Diamond Mine
SUBJECT	Aquatic Response Framework Revision – Plankton and Benthos Variable Selection

1. INTRODUCTION

Burgundy Diamond Mines Ltd. (Burgundy), formerly Arctic Canadian Diamond Company (Arctic), has been directed by the Wek'eezhii Land and Water Board (the Board) to update Version 3.2 of the Aquatic Response Plan for Plankton and Benthos (the Plan) to address directives on Version 3.1. The Board provided the following decisions and revisions in their Reasons for Decision from November 1, 2023 (WLWB 2023):

Decisions

1. *To not approve Version 3.1 of the Plankton and Benthos Response Plan.*
2. *To require Arctic to submit Version 3.2 of the Plankton and Benthos Response Plan within 90 days of communication of this decision, including Revision 1.*
3. *To require Arctic to select one of the following options:*
   a. *In Version 3.2 of the Plan, provide revised Medium and High ALs for phytoplankton density that can be triggered based on density measurements alone; or*
   b. *Provide a discussion and proposed revisions to the Response Framework to reflect Arctic's interpretation of phytoplankton total density as a variable in the Response Framework. If Option B is selected, Arctic is to coordinate with Board staff regarding how to align any proposed changes in the Response Framework with the Plankton and Benthos Response Plan.*
4. *To require Arctic submit additional evidence in Version 3.2 of the Plan to support that Ekati lakes will take three to five years to reverse eutrophication effects, including at minimum, the severity of the eutrophication events in Kodiak Lake and Cujo Lake.*

Revisions

1. *Arctic to revise the medium and high Action Levels M3 and H2 for Phytoplankton biomass and/or total density to "the average open-water sample event chlorophyll a concentration."*

The objective of this memorandum is to address Decision 3. For Decision 3, Burgundy selected Option B. This memorandum contains the proposed revision to the Aquatic Response Framework (ARF) and recommends an approach to aligning proposed changes in the ARF with the Plan.

2. RATIONALE FOR PROPOSED CHANGES TO THE AQUATIC RESPONSE FRAMEWORK

Through four iterations of the Plan (Versions 2.0, 3.0, 3.1, and 3.2), it has been established that it is not practicable to develop scientifically defensible medium and high Action Levels for total phytoplankton density, therefore changes are needed to the ARF. The proposed revision to the ARF, Section 5 in the approved Ekati Diamond Mine 2023 to 2025 Aquatic Effects Monitoring Program (AEMP) Design Plan, Version 8.1 (the AEMP Design Plan; ERM 2023), is with regard to how plankton and benthos variables are selected as ARF variables. The proposed revision will also exclude total phytoplankton density from the list of ARF variables based on the rationale provided in the Plan, Version 3.2.

The ARF plankton and benthos variable selection process is systematic and variables are compared against a set of criteria where confirmation of any of the criteria result in inclusion in the ARF (see Table 5.3-1 of the AEMP Design Plan; ERM 2023). Currently, the selection process for plankton and benthos variables does not include criteria to exclude variables, though the selection process for water quality does. Based on the ARF variable selection process completed as part of the 2022 AEMP Re-evaluation (ERM 2022a), total phytoplankton density was included because a mine-related effect was concluded for total phytoplankton density, based on the most recent evaluation of effects at the time which was the 2021 AEMP Annual Report (ERM 2022b).

The proposed change to the ARF plankton and benthos variable selection process is to add a step whereby a variable may be excluded based on variable specific rationale. This step allows for the consideration of whether there is a reason that an ARF variable, selected through the systematic process, should be excluded for a variable specific reason. Exclusion of a variable would require Board approval. A summary of the rationale for exclusion would be included in the ARF. This approach aligns with and compliments the Board's policy on adaptive management (MVLWB and GNWT 2019) as it utilizes information gained from the detailed assessment of the ARF variable, that may be completed during the development of an Aquatic Response Plan, through an ARF Re-evaluation, or through another submission requiring Board approval. Total phytoplankton density would continue to be an AEMP

evaluated variable and would support the interpretation of other ARF variables such as phytoplankton biomass and phytoplankton community composition.

The proposed revisions to the ARF are provided in Section 3.

3. PROPOSED REVISIONS TO THE AQUATIC RESPONSE FRAMEWORK

The ARF is described in Section 5 of the AEMP Design Plan (ERM 2023). To facilitate review of the proposed revisions, Section 5.3 is reproduced here with all the proposed revisions highlighted (highlighted text), and deleted text is struck through (~~deleted text~~). No other changes to the AEMP Design Plan are contemplated as part of this submission. References for citations appearing in the proposed text will be updated as appropriate when the AEMP Design Plan is next updated.

[AEMP DESIGN PLAN SECTION] 5.3 PLANKTON AND BENTHOS

This section describes the plankton and benthos variables selected for inclusion in the ARF, the applicable benchmarks, and description of approved Action Levels. The Significance Threshold for plankton and benthos is described in Section 5.5 and the reporting process for the ARF is described in Sections 6.3 and 6.4.

[AEMP DESIGN PLAN SECTION] 5.3.1 PLANKTON AND BENTHOS VARIABLES

The selection of phytoplankton, zooplankton, and benthos variables to be included within the ARF follows a similar method as for water quality variables in that it considers predictions made in the 1995 EIS and 2000 EA (BHP and Dia Met 1995 and 2000), and AEMP monitoring results up to and including 2021 (ERM 2022d).

Biological variables were divided into two distinct groups, the “general” and the “community” to distinguish between the benchmarks and Action Levels that are set in Sections 5.3.2 and 5.3.3 (Table 5.3-1; Figure 5.3-1). General biological variables are those that were considered appropriate for high level measures of change in biological communities (i.e., biomass and total density) and are calculated on an annual basis as part of the AEMP. General variables are assigned numerical benchmarks for the purposes of the ARF. Community variables (i.e., community composition and diversity) are also calculated on an annual basis in the AEMP but are considered more complex and; therefore, numerical benchmarks were not assigned to these variables. Changes in community composition in the AEMP are assessed through analysis of diversity indices and also through the examination of total and relative densities of major taxonomic groups. Diversity indices are complex because they are calculations that consider both species richness and species abundance, and the same diversity value may represent very different community compositions. Changes in the total or relative densities of major taxonomic groups can vary in their

ecological significance for a variety of reasons such as the importance of the group as a food resource for fish or other invertebrates, or the known tolerance of the group to disturbance.

Table 5.3-1 provides a summary of the decision steps followed for excluding or including each variable, flowing from left to right for plankton and benthos variables. If a variable is marked with a check (✓) in any of the four reasons for inclusion columns, then it was included for consideration as an ARF variable ~~in the ARF. Once a check was received in one column~~ and no further assessment of the variable for inclusion was completed. Dashes (-) were added to the remaining inclusion columns to indicate that the variable was not further assessed. Next, if any variable specific rationale for exclusion has been identified through the development or update of an Aquatic Response Plan or the ARF Re-evaluation or another submission requiring Board approval, a check (✓) is added to the exclusion column and the variable is excluded from the list of ARF plankton and benthos variables, as appropriate. ~~Dashes (-) were added to the remaining columns to indicate that the variable was not further assessed.~~

Currently, only total phytoplankton density is excluded for variable specific rationale. Through development of the Aquatic Response Plan for Plankton and Benthos (currently Version 3.2; ERM 2024), it has been established that it is not practicable to develop scientifically defensible medium and high Action Levels for total phytoplankton density because the potential effect of changes in total phytoplankton density on aquatic ecosystems are dependent on additional phytoplankton endpoints such as biomass and species composition. For example, the introduction of a growth-limiting nutrient into a waterbody should generally result in an increase in phytoplankton biomass, but if there is a shift in the species composition to larger phytoplankton cells, there may not necessarily be an increase in the cell density. There is also no widely accepted model relating trophic status to phytoplankton density as there is for trophic status and chlorophyll *a* concentration (Vollenweider and Kerekes 1982; Environment Canada 2004).

Therefore, the ARF plankton and benthos variables list includes:

- General:
  - Phytoplankton biomass (as chlorophyll a);
  - ~~Phytoplankton density;~~
  - Zooplankton biomass;
  - Zooplankton density;
  - Lake benthos density; and
  - Stream benthos density.
- Community:
  - Phytoplankton diversity/community composition;
  - Zooplankton diversity/community composition; and
  - Lake benthos diversity/community composition.

Stream benthos community variables will be assessed for inclusion within the ARF annually in the AEMP Report. The results of the assessment will be reported within the ARF Reporting appendix to Part 1 – Annual Report (also see Section 6.1). The assessment process will involve repeating the selection process described above using the most recent information. For example, if a mine-related effect for stream benthos EPT community composition is concluded for the first time during an AEMP year, the variable will be added to the revised ARF variable list (Figure 5.3-1).

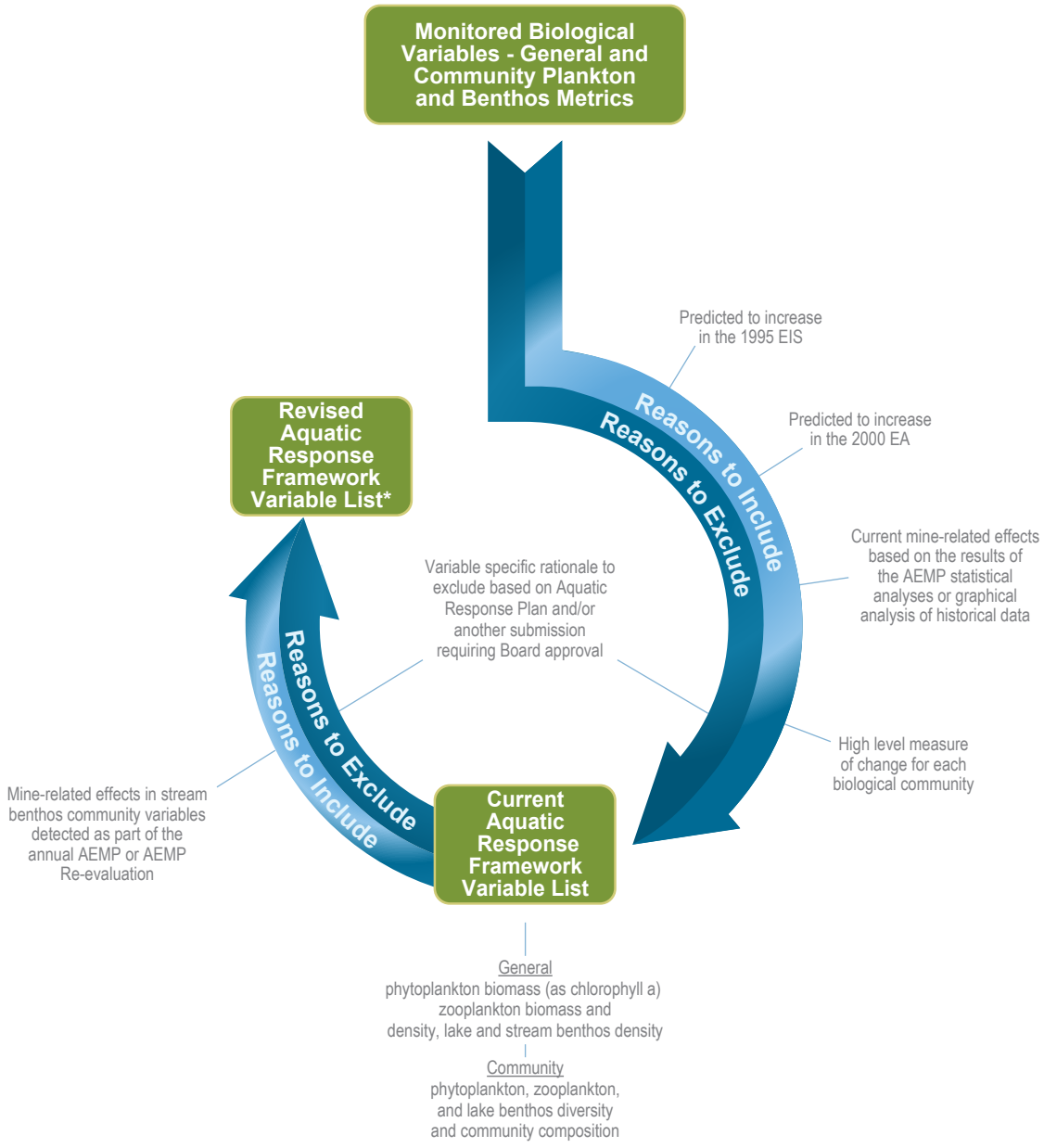
[AEMP DESIGN PLAN] TABLE 5.3-1 SELECTION OF ARF PLANKTON AND BENTHOS VARIABLES

Biological Variable	Variable Grouping	Reasons for Inclusion							Reasons for Exclusion		ARF Variable
		Predicted to Change in 1995 EIS	→	Predicted to Change in 2000 EA	→	Current Mine-related Effect?[1]	→	Included as High Level Measure of Change for Each Biological Community	→	Variable Specific Rationale	
Phytoplankton											
Biomass (as chlorophyll *a*)	General	-		✓[2]		-		-		-	Yes
Density	General	-		-		✓		-		✓[4]	~~Yes~~ No
Diversity/ Community Composition	Community	-		-		✓		-		-	Yes
Zooplankton											
Biomass	General	-		-		✓		-		-	Yes
Density	General	-		-		-		✓		-	Yes
Diversity/ Community Composition	Community	-		-		✓		-		-	Yes
Lake Benthos											
Density	General	-		-		✓		-		-	Yes
Dipteran Diversity/ Community Composition	Community	-		-		-[3]		-		-	Yes
Stream Benthos											
Density	General	-		-		-		✓		-	Yes
Dipteran Diversity/ Community Composition	Community	-		-		-		-		-	No

Biological Variable	Variable Grouping	Reasons for Inclusion							Reasons for Exclusion		ARF Variable
		Predicted to Change in 1995 EIS	→	Predicted to Change in 2000 EA	→	Current Mine-related Effect?[1]	→	Included as High Level Measure of Change for Each Biological Community	→	Variable Specific Rationale	
EPT Diversity/ Community Composition	Community	-		-		-		-		-	No

Notes:
ARF = Aquatic Response Framework; EA = Environmental Assessment; EIS = Environmental Impact Statement; EPT = Ephemeroptera, Plecoptera, Trichoptera
[1] Based on conclusions from 2021 AEMP Annual Report (ERM 2022b).
[2] Slightly elevated phytoplankton biomass was predicted to be possible but unlikely in Fay Bay downstream of the PSD.
[3] The 2015 AEMP identified a mine-related effect for dipteran community composition but subsequent analyses in the 2016 AEMP and 2015 and 2019 AEMP Re-evaluations suggest that the changes are unlikely attributed to mine- related activities. Given the previously identified mine-related effect for lake benthos dipteran diversity/community composition and the existing Aquatic Response Plan, this variable is retained as an ARF variable.
[4] See text in Section 5.3.1 of the ARF and the Aquatic Response Plan for Plankton and Benthos (ERM 2024).

FIGURE 5.3-1 SCHEMATIC OF THE SELECTION AND REVISION OF THE ARF PLANKTON AND BENTHOS VARIABLE LIST



Notes: To be provided annually in the AEMP report.*

[AEMP DESIGN PLAN SECTION] 5.3.2 PLANKTON AND BENTHOS BENCHMARKS

A method for deriving numerical benchmarks was developed for phytoplankton, zooplankton, and benthos general variables including biomass and total density. Community variables such as community composition and diversity of phytoplankton, zooplankton, and benthos were deemed to be too complex for numerical benchmarks and thus no benchmarks are provided for these variables. The method for developing numerical benchmarks is described below.

Phytoplankton, zooplankton, and benthos biomass and total density benchmarks are developed by identifying reasonable normal ranges based on reference and baseline conditions. The benchmarks are based on modelled distributions of baseline and reference lake or stream observations and the probability of observations occurring within the lower and upper extremes of these modelled distributions. A *p* value of 0.05 for both the upper and lower quantiles of the best fit distribution is used to calculate the benchmark for each variable (e.g., phytoplankton ~~density~~ biomass or zooplankton biomass).

Benchmarks are set as a range, meaning that if an observation (e.g., average phytoplankton ~~density~~ biomass for a lake in a given year) is less than the lower range of the benchmark or greater than the upper range of the benchmark, the benchmark is exceeded.

The data used to fit to the distributions includes:

- Reference lake or stream observations for Nanuq Lake and Outflow, Counts Lake and Outflow, Vulture Lake and Vulture-Polar Stream, and Northeast Lake and Outflow;
- Baseline observations for Kodiak Lake and Kodiak-Little Stream, Leslie Lake, Moose Lake and Moose-Nero Stream, Nema Lake and Nema-Martine Stream, Slipper Lake and Slipper-Lac de Gras Stream, and sites S2 and S3 in Lac de Gras;
- Baseline observations for Cujo Lake and Outflow and site LdS1 in Lac du Sauvage;
- Baseline observations for Fay Bay and Upper Exeter Lake; and
- Baseline observations for Ulu Lake, Horseshoe Lake and Outflow, HWL2 Lake and Outflow, Ross Lake and Outflow, Logan Lake and Outflow, and Lower Exeter Lake.

Kodiak Lake and Kodiak-Little data were only included if collected prior to 1997 because of the history of effects in the lake related to Sewage input into Kodiak Lake, which began in 1997. For the reference sites, data from the most recent three years are not included because observations from the three most recent years are considered when determining whether an Action Level is exceeded for a biological variable (see Section 5.3.3). Therefore, the data from these years cannot also be included in the dataset used to determine the benchmark. This is important because if the recent observations from both a reference site and a monitored site are consistently below or above the lower or upper quantiles defined as the benchmark, then the variable may not be changing because of mine activities (e.g., the variable may be changing due to a broad climatic pattern affecting all sites similarly) and it may not be appropriate for an Action Level to be exceeded. Baseline data from Fay Bay and Upper Exeter, Ulu, Connor, and Thinner lakes are only included for phytoplankton because the AEMP does not include zooplankton or benthos monitoring for these lakes.

The distribution of observed (empirical) data for each variable are plotted and compared to several common theoretical distributions (e.g., Weibull, normal, lognormal, etc.) to determine which best described the observed data. A comparison of the fit of the theoretical distributions to the observed data is conducted visually using goodness of fit plots (e.g., Figure 5.3-2) and summary statistics such as the Akaike information criterion and Bayesian information criterion (also known as Schwarz criterion; AIC and BIC). The AIC and BIC are measures of the quality of the statistical model for the given data and provide a means for model selection. The best fitting distribution for each variable is chosen based on best professional judgement of goodness of fit and a comparison of AIC and BIC values among the candidate distributions. Figure 5.3-2 shows an example of the goodness of fit plots. The distribution of empirical data is presented as bars in the top left panel and the Weibull distribution is represented by the curved line. In the other three panels, the distribution of the empirical data is represented by the circles; the closer the circles fit to the solid lines, the better the fit of the observed data to the theoretical distribution. In this example, the phytoplankton biomass data fit very closely to the Weibull distribution and the Weibull distribution was chosen as the best fit model.

Once the best fitting distribution is selected, the quantiles at (p = 0.05) are calculated for the upper and lower tails. The calculated quantiles at p = 0.05 represent a 1 in 20 probability that an observation (e.g., the mean phytoplankton ~~density~~ biomass for a lake in a given year) is less than the benchmark by chance alone, or a 1-in-20 chance that an observation is greater than the benchmark by chance alone. These quantiles represent the upper and lower ends of the range for the benchmark for each biological variable being assessed.

In the same way that water quality benchmarks may be updated based on new science, the biological benchmarks should also be periodically updated to incorporate baseline data for new development areas and more recent reference data. For the ARF, biological benchmarks will be updated every three years in conjunction with the AEMP Re-evaluation unless earlier updates are deemed necessary to incorporate other developments. The biological benchmarks were updated for the purposes of this report; for reference lakes, data collected through 2020 were included (Table 5.3-2).

The upper and lower biological benchmarks (i.e., normal ranges) will be updated to include baseline observations from the PLD Lakes for the first AEMP Annual Report that includes the PLD lakes.

FIGURE 5.3-2 EXAMPLE OF EMPIRICAL AND THEORETICAL DISTRIBUTION FIT, PHYTOPLANKTON BIOMASS

[Figure 5.3-2 is not included because no changes are contemplated.]

TABLE 5.3-2 BIOLOGICAL VARIABLE BENCHMARKS

Biological Variable	Units	Lower Benchmark (p = 0.05)	Upper Benchmark (p = 0.05)
Chlorophyll *a*	µg/L	0.07	1.50
~~Total phytoplankton density~~	~~cells/mL~~	~~129~~	~~9,452~~
Zooplankton biomass	mg dwt/m^3	20	238
Total zooplankton density	organisms/m^3	5,811	124,343
Lake benthos density	organisms/m^2	260	10,540
Stream benthos density	organisms/m^2	198	12,111

Notes:
dwt = dry weight

[AEMP DESIGN PLAN SECTION] 5.3.3 PLANKTON AND BENTHOS ACTION LEVELS

Similar to water quality variables, LALs, MALs, and HALs are defined in the ARF for phytoplankton, zooplankton, and benthos variables. For biological variables, only LALs have been predefined for all ARF variables. MALs and HALs are developed as part of the Aquatic Response Plan once the LAL is exceeded. As described for water quality, setting of MALs and/or HALs may be deferred if clear and appropriate rationale is provided (e.g., additional research is required). MALs and HALs may be generic (encompass all biological variables) or based on variable specific considerations.

Spatially, Action Levels are triggered based on biological variables at near-field sites as defined in Table 5.2-5 for water quality variables. For stream benthos, the outflow stream of each near-field lake identified in Table 5.2-5 is considered the near-field site, these include:

- Moose-Nero and Kodiak-Little streams in the Koala Watershed;
- Cujo Outflow in the King-Cujo Watershed; and
- Horseshoe Outflow in the Horseshoe Watershed.

Action Levels for general and community phytoplankton, zooplankton, and benthos variables are described below.

[AEMP DESIGN PLAN SECTION] 5.3.3.1 LOW ACTION LEVELS

General Biological Variables (Biomass and Total Density)

A LAL for phytoplankton biomass, zooplankton biomass and total density, or benthos ~~biomass or~~ total density variables is exceeded when the following conditions are met:

L1. A mine-related effect is concluded for a near-field site, based on AEMP methods for determining mine-related effects for phytoplankton, zooplankton, and benthos biomass or total density; and

L2. The specified biological variable mean is less than the lower benchmark or greater than the upper benchmark, for the current AEMP year and the previous two years at any near-field site, using the biological benchmarks based on upper and lower quantiles ($p = 0.05$) of the fitted distributions.

When determining whether a low Action Level for phytoplankton, zooplankton, or benthos biomass or total density variable is exceeded, AEMP methods for the Evaluation of Effects (see Section 4.5) are used to determine and conclude whether a mine-related effect occurred. The second condition, condition (L2) for exceeding a low Action Level for general biological variables is required due to the inherent variability in biological data. For example, it is difficult to conclude that a one-time difference from reference conditions is indicative of a mine-related effect as opposed to natural variation whereas a sustained difference from reference and baseline conditions is stronger evidence that a mine-related effect may be occurring.

Community Biological Variables (Community Composition and Diversity)

A LAL for phytoplankton, zooplankton, or benthos community composition or diversity variables is exceeded when the following conditions are met:

L1. Based on AEMP methods for determining mine-related effects for phytoplankton, zooplankton, and benthos diversity and community composition (i.e., graphical analysis and best professional judgement), a mine-related effect is detected or suspected at a near-field site; and

L2. The mine-related effect detected or suspected in condition one (L1) is based on three years of data including the current AEMP year and the previous two years at any near-field site.

Graphical analysis and best professional judgement are the primary methods used to determine whether there are mine-related effects for the diversity and community composition of plankton and benthos communities in the AEMP. Essentially, data for the current year must appear different from all baseline data to be considered a mine-related effect or a potential effect. If similar trends are observed in reference and monitored sites then any changes are concluded to be a result of external factors or natural variation rather than mine-related effects.

Any data abnormalities or trends of less than three years will continue to be discussed in the AEMP Report and/or AEMP Re-evaluation and, if appropriate, management actions may be initiated prior to exceeding the LAL.

If the cause of the exceedance of a biological Action Level is known and can be linked to a variable for which an Aquatic Response Plan already exists, the Aquatic Response Plan for the biological variable may refer to an existing Aquatic Response Plan where actions are being undertaken that are appropriate to address the current biological exceedance. It is also possible that an existing Aquatic Response Plan may be amended or revised to reflect additional actions relevant to the biological Action Level exceedance.

[AEMP DESIGN PLAN SECTION] 5.3.3.2 MEDIUM AND HIGH ACTION LEVELS

MALs and HALs for biotic variables that have been approved by the Board to date are presented in Table 5.3-3.

TABLE 5.3-3 APPROVED MEDIUM AND HIGH ACTION LEVELS FOR PHYTOPLANKTON, ZOOPLANKTON, AND BENTHOS VARIABLES

Variable	Medium Action Level Conditions	High Action Level Conditions	Source
Phytoplankton biomass or total density	1. The LAL for phytoplankton biomass ~~or total density~~ is met (conditions L1 and L2); 2. The exceedance of the LAL is due to an exceedance of the upper benchmark for phytoplankton biomass ~~or total density~~; and 3. The average ~~open-water season~~sample event chlorophyll *a* concentration is higher than the maximum value listed in Table 2.2-3 [of the Aquatic Response Plan for Plankton and Benthos; ERM ~~2021d~~2024] for the current AEMP year at any near-field site.	1. The MAL for phytoplankton biomass is met (conditions M1, M2, and M3); and 2. The average ~~open-water season~~sample event chlorophyll *a* concentration is higher than the maximum value listed in Table 2.2-3 [of the Aquatic Response Plan for Plankton and Benthos; ERM 2021d] for the current AEMP year and the previous two years at any near-field site.	ERM 2021d, WLWB 2022cTo be determined
Phytoplankton, zooplankton, or lake benthos community composition	1. The LAL for phytoplankton, zooplankton, or lake benthos community composition is met; 2. Based on AEMP methods for determining mine-related effects in edible phytoplankton density, adult crustacean zooplankton density, or dipteran density (i.e., statistical analysis, graphical analysis and best professional judgement), a mine-related decline is detected in a near-field lake; and 3. The mean edible phytoplankton density, adult crustacean zooplankton density, or dipteran benthos density for the current AEMP year is less than the lower range of observed baseline data in a near-field lake site.	1. The MAL is met; and 2. The mean edible phytoplankton density, adult crustacean zooplankton density, or benthos dipteran density for the current AEMP year and the previous two years is less than the lower range of observed baseline data in a near-field lake site.	ERM 2021d, WLWB 2022cTo be determined

4. SUGGESTED APPROACH FOR PUBLIC REVIEW AND DOCUMENTATION OF REVISIONS TO THE AQUATIC RESPONSE FRAMEWORK

Burgundy suggests to the Board that the public review of Version 3.2 of the Plan, including the proposed revisions to the ARF in this memorandum, would be sufficient for the approval of revisions to the ARF (Section 5 within the AEMP Design Plan, Version 8.1; ERM 2023) and would not require a revised version of the AEMP Design Plan to be submitted.

Tracking of changes to the ARF is inherently built into the AEMP Annual Reporting which includes an ARF Reporting Appendix. The annual ARF Reporting Appendix annotates the current Action Level exceedances, a summary of the Aquatic Response Plans, a review of the ARF variables, and a summary of changes to the ARF components. The intention of reviewing the ARF variable and components annually and reporting in this appendix is to track the changes an annual basis and to avoid continuously updating the ARF which is regularly updated on a three-year cycle (as described in Water Licence W2022L2-0001) or by a Board direction. For example, Section 5.3.1 of the AEMP Design Plan, Version 8.1 states "*Stream benthos community variables will be assessed for inclusion within the ARF annually in the AEMP Report. The results of the assessment will be reported within the ARF Reporting appendix to Part 1 – Annual Report*…" (ERM 2023). Although, previously changes to the ARF through the AEMP reporting have resulted in the inclusion of additional variables to the ARF, it would similarly track Board approved changes that resulted in the exclusion of a variable.

Burgundy commits to documenting and tracking all revisions to the ARF in the ARF Reporting Appendix to the AEMP Annual Report and implementing those revisions in subsequent years, until the ARF and AEMP Design Plan version is updated. The ARF and AEMP Design Plan version are updated through the regularly scheduled ARF Re-evaluation (once every three-years as described in Water Licence W2022L2-0001) or another Board directed update. Finally, Burgundy is not aware of any Water Licence condition that would preclude this approach being acceptable.

5. REFERENCES

ERM. 2022a. *Ekati Diamond Mine: 2021 Aquatic Effects Monitoring Program Part 1 – Annual Report, Part 2- Statistical Report.* Prepared for Arctic Canadian Diamond Company Ltd. by ERM Consultants Canada Ltd.: Yellowknife, Northwest Territories.

ERM. 2022b. *Ekati Diamond Mine: 2022 Aquatic Effects Monitoring Program (AEMP) Re-evaluation*. Prepared for Arctic Canadian Diamond Company Ltd. by ERM Consultants Canada Ltd.: Yellowknife, Northwest Territories.

ERM. 2023. *Ekati Diamond Mine: 2023 to 2025 Aquatic Effects Monitoring Program Design Plan, Version 8.1*. Prepared for Arctic Canadian Diamond Company Ltd. by ERM Consultants Canada Ltd.: Yellowknife, Northwest Territories.

MVLWB and GNWT. 2019. *Guidelines for Aquatic Effects Monitoring Programs.* Mackenzie Valley Land and Water Board and Government of Northwest Territories.

WLWB. 2023. *Reasons for Decision: Decision from the Wek'èezhìı Land and Water Board Meeting of November 1, 2023*. Subject: Plankton and Benthos Response Plan Version 3.1). Prepared by the Wek'èezhìi Land and Water Board: Yellowknife, Northwest Territories.