

Wetland Monitoring Plan

Summit Pit

Mountain Ash Limited Partnership

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Prepared by:

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1.0 Project Information

Mountain Ash Limited Partnership (MALP) is planning to develop the Summit Pit (the Project) along Highway 567 within NW and SW 31-026-03 W5M, northeast of the Town of Cochrane, in Rocky View County, Alberta (Figure 1, Appendix A).

SLR Consulting (Canada) Ltd. (SLR) was retained by MALP to complete a Wetland Assessment and Impact Report (WAIR) for the Project. A total of 23 water bodies were assessed as part of the WAIR, of which MALP has proposed to avoid two, Water bodies 19 and 20 (SLR 2022). These wetlands are described in the 2022 WAIR, shown in the attached figure (Figure 1) and summarized in Table 1.

Table 1: Water Bodies 19 and 20

Water Body ID	Classification	Area (ha)
Water Body 19	Temporary Graminoid Marsh	0.676
Water Body 20	Temporary Graminoid Marsh	0.722

Alberta Environment and Parks, now Alberta Environment and Protected Areas (AEPA), requested that a monitoring plan for these avoided wetlands be provided.

2.0 Wetland Protection

These two wetlands are located adjacent to the Phase 4 extraction boundary of the Project as shown in Figure 1. The material within Phase 4 is expected to be extracted over a period of five to seven years. These wetlands will be protected by an earthen berm constructed at a distance of at least 10 m set back, between the wetlands and the extraction boundary. This 10 m setback is identified in Provincial guidance as an effective width of vegetation (Government of Alberta (GoA) 2012), and as such no indirect effects are anticipated. Hydrology will be maintained through breaks and/or culverts in the berm as required.

3.0 Wetland Monitoring Plan

In accordance with the Alberta Wetland Mitigation Directive (GoA 2018), this Wetland Monitoring Plan (the Plan) ensures that the natural conditions and function of the wetlands are maintained throughout the lifespan of the Project. Specifically, the Plan provides a comparison of pre-Project and post-Project characteristics, including wetland area, class, vegetation, soils, hydrology, and habitat.

These characteristics will be evaluated prior to extraction activities (i.e., pre-Project) within the wetland catchment areas, in accordance with the Alberta Wetland Identification and Delineation Directive (GoA 2015a). This evaluation will provide the baseline conditions in which to compare the post-Project characteristics throughout the monitoring period.

3.1 Wetland Monitoring Timeframe

A pre-Project evaluation will be conducted during the growing season within one year prior to the commencement of Project activities within the wetland catchment areas. The wetland boundaries will be delineated and flagged during this evaluation.

Post-Project evaluations will be conducted during the growing season:

- One year post Project activities within the wetland catchment areas;
- Three years post Project activities within the wetland catchment areas;
- Five years post Project activities within the wetland catchment areas;
- Seven years post Project activities within the wetland catchment areas, if Project activities continue past six years; and
- One year post cessation of the Project activities within the wetland catchment areas.

3.2 Wetland Evaluation

Wetland area and classification: The wetland area will be classified and delineated in accordance with the Alberta Wetland Classification System (GoA 2015b) and the Alberta Wetland Identification and Delineation Directive (GoA 2015a). For all post-Project evaluations, any changes in wetland area and/or class compared to pre-Project will be identified.

Wetland vegetation function: Wetland vegetation function will be evaluated by locating and marking five 1 m x 1 m vegetation plots distributed throughout each wetland. The plots will be photographed, and geo-referenced with GPS to ensure the same plots are sampled in each evaluation. The results will be recorded on the Field form for wetland delineation procedures in Alberta (wetland field form) provided in the Alberta Wetland Identification and Delineation Directive (GoA 2015a).

Wetland soil function: Wetland soil function will be evaluated by locating and digging one soil plot in the centre of each wetland. Plots will be geo-referenced with GPS to ensure the same plots are sampled in each evaluation. The results will be recorded on the wetland field form.

Wetland hydrological function: Wetland hydrological function will be evaluated by surveying hydrological features as described in the wetland field form throughout the entirety of each wetland. Results will be recorded on the wetland field form.

Wetland habitat: Wetland vegetation, soils, and hydrology are all important aspects of wetland habitat; therefore, a change in wetland vegetation, soils, or hydrological function are expected to impact habitat. In addition to the information collected for these functions, all incidental wildlife and invertebrate observations will be recorded.

3.3 Reporting and Adaptive Management

Results of the evaluations will be provided to AEPA in a letter report within one month of field sampling. Post-Project evaluations will compare the results to the pre-Project evaluation and identify any changes that indicate unexpected negative wetland impacts or a trajectory for wetland loss. If there are any unexpected negative wetland impacts or wetland loss, the reports will provide a management plan to address these impacts (e.g., weed control, vegetation planting, etc.) in consultation with the AEPA Wetland Specialist.

4.0 Closure

If you should have any questions, please contact Alana-Rose Lynes at alynes@slrconsulting.com.

Sincerely,

SLR Consulting (Canada) Ltd.



Alana-Rose Lynes, M.Sc., P. Biol.

Senior Wetland Ecologist

Attachment: Figure 1: Waterbody Catchment

Distribution: 1 electronic copy – Mountain Ash Limited Partnership
1 electronic copy – SLR Consulting (Canada) Ltd.

5.0 References

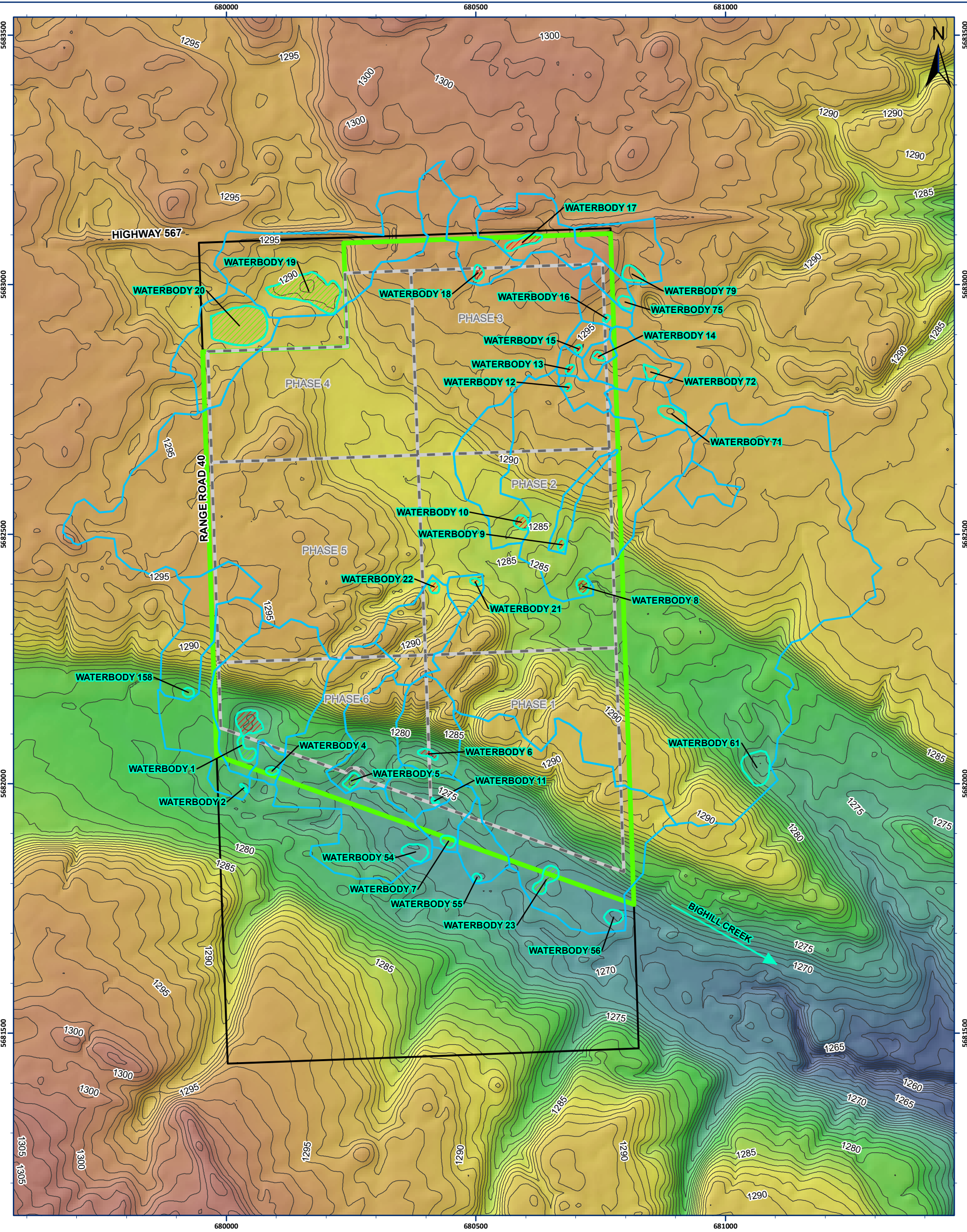
Government of Alberta (GoA). 2012. Stepping Back from the Water: A Beneficial Management Practices Guide for New Development Near Water Bodies in Alberta's Settled Region. Environment and Sustainable Resource Development.

Government of Alberta (GoA). 2015a. Alberta Wetland Identification and Delineation Directive. Edmonton AB: Water Policy Branch, Alberta Environment and Parks.

Government of Alberta (GoA). 2015b. Alberta Wetland Classification System. Edmonton AB: Water Policy Branch, Alberta Environment and Parks.

Government of Alberta (GoA). 2018. Alberta Wetland Mitigation Directive. Edmonton AB: Water Policy Branch, Alberta Environment and Parks.

SLR. 2022. Wetland Assessment and Impact Report. Mountain Ash Limited Partnership Summit Pit. NW and SW 31-026-03 W5M. Rocky View County, Alberta



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CONTOUR (1m)

CATCHMENT

EXTRACTION PHASE BOUNDARY

PROJECT BOUNDARY

PROPERTY BOUNDARY

WATERBODY

INDICATES WATERBODY THAT WILL BE REMOVED

INDICATES WATERBODY THAT WILL BE LEFT IN PLACE

ELEVATION

High : 1306.45

Low : 1256.18

0 50 100 200 300 m

SCALE 1:7,500
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 11N
THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY
AND SHOULD NOT BE USED FOR NAVIGATION

MOUNTAIN ASH LIMITED PARTNERSHIP

SUMMIT PROJECT

WATERBODY CATCHMENTS



FIGURE NO:
1

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