

replacement with homogenized sands will allow groundwater to more freely drain from the ridge. No evaluation of the elevation of groundwater beneath Trail Ridge following mining has been presented in the permit applications.

- A general lowering of the water table beneath Trail Ridge could result in reconstructed wetlands that lack water and streams that no longer flow.
- Mining permit applications have been submitted without the benefit of reports describing the quantity and quality of groundwater and/or surface waters at the site. There is no discussion of surface water quality before mining, during mining, or expected quality following mining. Groundwater quality before mining, during mining, and following mining are nowhere discussed.
- There are no chemical concentrations or water elevations established based on baseline characterization, which would trigger changes to site operations or additional reclamation actions.
- There is no discussion of the reclamation steps that would or could be taken to return site surface water and groundwater quality to its pre-mining condition in the event that impacts are detected. Regulators and the public are being asked to review and approve of this development without the benefit of this basic information.
- It is my recommendation that a complete evaluation of the proposal be required prior to taking any action on permitting this proposal.<sup>104</sup>

Similarly, Dr. Rheinhardt concluded his expert report by questioning whether Twin Pines had the knowledge and expertise needed to attempt a wetlands creation project on top of homogenized tailings where the hydrology of the site may have changed. He explained that mining the pits could cause hydrologic changes in the pits, as well as outside the footprint of the mine. He said that Twin Pines mitigation plan does not discuss such details and is “rudimentary at best.”<sup>105</sup> Based on that plan, Dr. Rheinhardt remarked that Twin Pines does not have a “reasonable probability of reclamation success.”<sup>106</sup> Then he pointed out that Twin Pines did not reference in its application any past projects where it “successfully created wetlands in mined sands.”<sup>107</sup> Dr. Rheinhardt even pointed out that Twin Pines probably does not have a firm grasp on whether creating wetlands at the mining site was going to be cost prohibitive.<sup>108</sup>

We ask that Twin Pines address the points Hutson and Dr. Rheinhardt make above. In the beginning of his report, Hutson explains the components of a mine plan. In addition to responding to the experts’ earlier points, Twin Pines should explain how it i) characterized the

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<sup>104</sup> See generally Hutson Report.

<sup>105</sup> Rheinhardt Report at 6.

<sup>106</sup> *Id.*

<sup>107</sup> *Id.* at 7.

<sup>108</sup> *Id.* at 6.