RESPONSE TO SUBMITTERS EVIDENCE

1. I would like to take the opportunity to respond to three matters raised in the Submitters Evidence by Dr Bennett and Mr Rodway on behalf of the Waiau Working Party as related to my Evidence.

2. With respect to mitigation of the increased risk of phytoplankton blooms (in the new parallel and existing channels compared to existing channels), Dr Bennett has indicated that the number of additional flushing flows has been overestimated, and recreational flows are already included in the current flow regime so will not be an additional part of any future flow regime. To clarify, my point is that all future flushing flows and recreational flow releases will assist in mitigating and delaying the risk of phytoplankton blooms in the channels upstream of the MLC following completion of the Project (paragraphs 25, 54, 62, 105). Furthermore, the proposed water quality monitoring condition (General Condition 15 (e)) specifies additional flow releases specific to manage increased phytoplankton (paragraph 123).

3. With regards to the mention of the entire recreational flow release being provided from Lake Manapōuri (paragraph 85), this was intended to be hypothetical and to illustrate that such a release would replace all water in the Waiau Arm based on the calculations of Spigel et al. (2006). The wording was not clear and I thank Dr Bennett for pointing that out. In practice, all recreational flows released to the Lower Waiau River include a proportion of flow from the Mararoa River with the balance of flow from the Waiau Arm and Lake Manapōuri.

4. In regard to the chlorophyll *a* trigger level set out in the proposed monitoring condition (5mg/m^3), both Dr Bennett and Mr Rodway submit that 2mg/m^3 is an appropriate trigger level for the Waiau Arm. The 5 mg/m^3 trigger level was selected as it represents a change in status to eutrophic conditions (paragraph 123) and a single sample at this concentration would raise a red flag. I note that 5 mg/m^3 is within Band A for the phytoplankton attribute in the NPS-FM for *annual maximum* (≤ 10 mg/m^3) and an appropriate metric for an individual sample.

Kristy Hogsden

13 September 2024