

EMAIL: from Ella Tennent

DATE: 12-Jul-22

Hi June

Yes they are a useful measure and it seems to be an error that the conditions don't require records of these to be provided to BOPRC.

There are turbidity meters and telemetry which can replace the black disk method (which is a bit labour intensive and would require manual records to be kept). It would be good if the consent conditions could be flexible enough to provide for the uptake of such technology.

The black disk method (or turbidity meters) provides real time results so that dredging operations can be adjusted immediately to comply with conditions. However suspended solids are analysed by a lab so there is a lag between taking the sample, getting it to the lab, having it analysed and receiving the results. As such, it doesn't provide timely results to the consent holder to allow them to adjust their method in order to comply. We consider the black disk (or turbidity meter) requirements should also be imposed during winter but the % change can be greater than in summer.

November is missing from the conditions and this appears to be an error.

In regards to the current speed suggestion, we think this is addressed with the clarity and quality limits. Limiting the ability to dredge in river currents exceeding 1 knot could potentially have adverse outcomes for organisms in the river with dredging stopping and restarting affecting their recovery from the activity, so we don't support the river current speed limit suggested by the Yacht Club.

Below are our suggestions.

5.6.1 Dredging of the Whakatāne River channel during the months of ~~November~~ December to February (inclusive) must not decrease water clarity (as measured by the black disk horizontal range, calibrated turbidity meter or similar method) by more than 20%, below background levels, within 200 metres of the dredging position. The background water clarity level must be defined as being the water clarity 500 metres upstream of the dredging position.

5.6.2 Dredging of the Whakatāne River channel between March to August (inclusive) must not result in:

(a) a suspended solids concentration within the water column greater than 150 g/m³ above the background suspended solids level as measured 200 metres distant from the dredging position on an outgoing tide. The background suspended solids level must be defined as being the ~~natural~~ suspended solids level 500 metres upstream of the dredging position; and
(b) a decrease in water clarity (as measured by the black disk horizontal range, calibrated turbidity meter or similar approved method) by more than 50%, below background levels, within 200 metres of the dredging position. The background water clarity level must be defined as being the water clarity 500 metres upstream of the dredging position.

5.6.3 The consent holder must take ~~visual~~ water clarity measurements (using the black disk method, calibrated turbidity meter or similar approved method) at a point 500 metres upstream of the dredging position and a point 200 metres downstream of the dredging position. The water clarity measurements must be undertaken at least daily on an outgoing tide, during dredging operations.

5.6.4 All water clarity measurements required by condition 5.6.3 of this Coastal Permit must be carried out in accordance with the methodology described in "Colour and Clarity of Natural Waters; Science of Management of Optical Water Quality" by Davies-Colley et al (1993).

5.6.5 The consent holder must:

- a. Supply the ~~water clarity~~ measurements required under Conditions 5.6.1 and 5.6.2 ~~5.6.3 and 5.6.4~~ of this Coastal Permit to the Regional Council no later than two (2) working days after receiving the results; and
- b. Include the ~~water clarity~~ measurements in the Annual Performance Report prepared for the subsequent year of Boat Harbour operations after the dredging campaign as required by prepared Condition 1.5.8 of the Schedule of Common Conditions.

BTW there is a reference error in condition 1.5.5.1(b) but I expect you've already spotted that.
Kind regards,
Ella