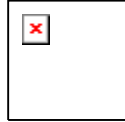
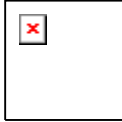


Water Take Conditions

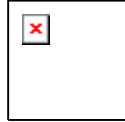
MWRL Proposed Conditions	UWAG - New	Replacement	Comments																																																
1. Consent is granted for a term expiring on the 30 th of April 2025.	Consent is granted for a term expiring on the 30 th of April 2025.	Consent is granted for a term expiring on the [REDACTED]																																																	
2. Water shall only be taken and / or diverted from [insert details of take location] at or about map reference [NZMS insert map ref] at the property referred to as [insert property name].	Water shall only be taken and / or diverted from [insert details of take location] at or about map reference [NZMS insert map ref] at the property referred to as [insert property name].	Water shall only be taken and / or diverted from [insert details of take location] at or about map reference [NZMS insert map ref] at the property referred to as [insert property name].																																																	
<p>3. Water for irrigation shall only be taken between 1 September and the following 30 April and only in accordance with the maximum rate, daily volume (being from 12.00am to 11.59pm) and annual volume (measured between 1 July and the following 30 June) set out in Table A.</p> <p>Table A – Maximum Rates & Volumes</p> <table border="1" data-bbox="189 772 783 1610"> <thead> <tr> <th>Year</th> <th>Maximum rate of abstraction (litres / second)</th> <th>Maximum Daily Volume (cubic metres / day)</th> <th>Maximum Annual Volume (cubic metres / year)</th> </tr> </thead> <tbody> <tr> <td>1 September 2009 to 30 April 2010</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2010 to 30 April 2011</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2011 to 30 April 2012</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2012 to 30 April 2013</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2013 to 30 April 2014 and every year thereafter</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> </tbody> </table>	Year	Maximum rate of abstraction (litres / second)	Maximum Daily Volume (cubic metres / day)	Maximum Annual Volume (cubic metres / year)	1 September 2009 to 30 April 2010	X l/s	X m ³ /day	X m ³ /annum	1 September 2010 to 30 April 2011	X l/s	X m ³ /day	X m ³ /annum	1 September 2011 to 30 April 2012	X l/s	X m ³ /day	X m ³ /annum	1 September 2012 to 30 April 2013	X l/s	X m ³ /day	X m ³ /annum	1 September 2013 to 30 April 2014 and every year thereafter	X l/s	X m ³ /day	X m ³ /annum	<p>Water for irrigation shall only be taken between 1 September and the following 30 April and only in accordance with the maximum rate, daily volume (being from 12.00am to 11.59pm) and annual volume (measured between 1 July and the following 30 June) set out in Table A.</p> <p>Table A – Maximum Rates & Volumes</p> <table border="1" data-bbox="893 772 1486 1610"> <thead> <tr> <th>Year</th> <th>Maximum rate of abstraction (litres / second)</th> <th>Maximum Daily Volume (cubic metres / day)</th> <th>Maximum Annual Volume (cubic metres / year)</th> </tr> </thead> <tbody> <tr> <td>1 September 2009 to 30 April 2010</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2010 to 30 April 2011</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2011 to 30 April 2012</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2012 to 30 April 2013</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> <tr> <td>1 September 2013 to 30 April 2014 and every year thereafter</td> <td>X l/s</td> <td>X m³/day</td> <td>X m³/annum</td> </tr> </tbody> </table>	Year	Maximum rate of abstraction (litres / second)	Maximum Daily Volume (cubic metres / day)	Maximum Annual Volume (cubic metres / year)	1 September 2009 to 30 April 2010	X l/s	X m ³ /day	X m ³ /annum	1 September 2010 to 30 April 2011	X l/s	X m ³ /day	X m ³ /annum	1 September 2011 to 30 April 2012	X l/s	X m ³ /day	X m ³ /annum	1 September 2012 to 30 April 2013	X l/s	X m ³ /day	X m ³ /annum	1 September 2013 to 30 April 2014 and every year thereafter	X l/s	X m ³ /day	X m ³ /annum	<p>Water may be taken at a rate not exceeding XXX litres per second, with a volume not exceeding XXX cubic metres per day, and XXX cubic metres between 1 July and the following 30 June.</p>	
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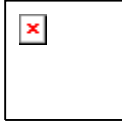
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>4. Water allocated in Table A of condition (XXX) shall be used only for the spray irrigation of [insert uses applied for] to irrigate [x number of] hectares within a command area of [x number of] hectares on the area of land shown on attached Plan A at or about [insert map ref and plan showing area].</p> <p>OR</p> <p>Water for stockwater supply shall only be taken between 1 July and the following 30 June and only in accordance with a maximum rate of [insert take rate] litres per second, maximum daily volume of [insert daily volume] cubic metres per day (being from 12.00am to 11.59pm), and a maximum annual volume of [insert annual volume] cubic metres per annum (measured between 1 July and the following 30 June).</p>	<p>Water allocated in Table A of condition (XXX) shall be used only for the spray irrigation of [insert uses applied for] to irrigate [x number of] hectares within a command area of [x number of] hectares on the area of land shown on attached Plan A at or about [insert map ref and plan showing area].</p> <p>OR</p> <p>Water for stockwater supply shall only be taken between 1 July and the following 30 June and only in accordance with a maximum rate of [insert take rate] litres per second, maximum daily volume of [insert daily volume] cubic metres per day (being from 12.00am to 11.59pm), and a maximum annual volume of [insert annual volume] cubic metres per annum (measured between 1 July and the following 30 June).</p>	<p>The taking of water as specified in condition XXX shall be used only for the irrigation of [insert uses applied for] to irrigate [x number of] hectares within a command area of [x number of] hectares on the area of land shown on Plan A at or about [insert map ref and plan showing area].</p>	<p>Comment [c1]: Only need this wording where there are command areas.</p> <p>Comment [c3]: Only need this wording where there are command areas.</p> <p>Comment [c2]: This condition only needs to be used where the take is a joint stockwater/irrigation water take</p>
<p>5. The taking of water in terms of this consent shall cease for a period required by any owners and/or operators of the Waitaki Power Scheme, where the owners and/or operators consider it necessary to undertake maintenance on, to ensure the structural integrity and safety of, or to avoid risk or compromise to the operation of, the Waitaki Power Scheme.</p>	<p>The taking of water in terms of this consent shall cease for a period required by any owners and/or operators of the Waitaki Power Scheme, where the owners and/or operators consider it necessary to undertake maintenance on, to ensure the structural integrity and safety of, or to avoid risk or compromise to the operation of, the Waitaki Power Scheme</p>		
<p>6. The taking of water in terms of this consent shall cease whenever any owners and/or operators of the Waitaki Power Scheme ceases to take, divert and/or discharge water into the [insert relevant name – Tekapo, Pukaki, Ohau] canal(s), unless the owner and/or operator of the Waitaki Power Scheme gives written agreement to the continuation of take.</p> <p><i>Advice Note:</i></p> <p>Any transfer or variation of this consent or its conditions that alters the volume or location of the take (or any replacement application) is likely to require the approval from the holder/s of the consents to operate the Waitaki Power Scheme.</p> <p>The Waitaki Power Scheme means the works including hydraulic control structures, dams, canals, water diversions, penstocks, spill weirs, spill gates, bypass valves, sluice gates, power stations and generating plant, associated ancillary land and structures and resource consents and other rights held by operator/s of the Waitaki Power Scheme to utilise the waters and tributary inflows of Lakes Tekapo, George Scott, Pukaki, Ohau, Ruataniwha, Benmore, Aviemore and Waitaki to generate electricity.</p>	<p>The taking of water in terms of this consent shall cease whenever any owners and/or operators of the Waitaki Power Scheme ceases to take, divert and/or discharge water into the [insert relevant name – Tekapo, Pukaki, Ohau] canal(s), unless the owner and/or operator of the Waitaki Power Scheme gives written agreement to the continuation of take.</p> <p><i>Advice Note:</i></p> <p>Any transfer or variation of this consent or its conditions that alters the volume or location of the take (or any replacement application) is likely to require the approval from the holder/s of the consents to operate the Waitaki Power Scheme.</p> <p>The Waitaki Power Scheme means the works including hydraulic control structures, dams, canals, water diversions, penstocks, spill weirs, spill gates, bypass valves, sluice gates, power stations and generating plant, associated ancillary land and structures and resource consents and other rights held by operator/s of the Waitaki Power Scheme to utilise the waters and tributary inflows of Lakes Tekapo, George Scott, Pukaki, Ohau, Ruataniwha, Benmore, Aviemore and Waitaki to generate electricity.</p>		<p>Comment [c4]: This condition only needs to apply to those takes from the Cannals.</p>



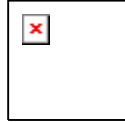
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>7. The consent holder shall, before the first exercise of this consent:</p> <p>(a) (i) install a water meter(s) that has an international accreditation or an equivalent New Zealand calibration endorsement suitable for use with an electronic recording device, from which the rate and the volume of water taken can be determined to within an accuracy of plus or minus five percent at a location(s) that will ensure the total take of water from [insert waterbody name] is measured; and</p> <p>(ii) install a tamper-proof electronic recording device such as a data logger that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season's (as specified in conditions (XXX) and (XXX) (XXX)) data of water taken as specified in clause (b) (ii), or which is telemetered, as specified in clause (b)(iii).</p> <p>(b) The water meter and recording device(s) shall:</p> <p>(i) be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and</p> <p>(ii) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which shall be downloaded and stored in a commonly used format and provided to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; or</p> <p>(iii) be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder. No data in the recording device(s) shall be deliberately changed or deleted.</p> <p>(c) The measuring device shall be installed at a site that retains a stable rating (i.e. a man-made channel, concrete, steel or fibreglass pipe). Installation shall be in accordance with ISO 1100/1-1981 or equivalent and be undertaken by a suitably qualified person.</p>	<p>The consent holder shall, before the first exercise of this consent:</p> <p>(a) (i) install a water meter(s) that has an international accreditation or an equivalent New Zealand calibration endorsement suitable for use with an electronic recording device, from which the rate and the volume of water taken can be determined to within an accuracy of plus or minus five percent or 10 percent at a location(s) that will ensure the total take of water from [insert waterbody name] is measured; and</p> <p>(ii) install a tamper-proof electronic recording device such as a data logger that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season's (as specified in conditions (XXX) and (XXX) (XXX)) data of water taken as specified in clause (b) (ii), or which is telemetered, as specified in clause (b)(iii).</p> <p>(b) The water meter and recording device(s) shall:</p> <p>(i) be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and</p> <p>(ii) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which shall be downloaded and stored in a commonly used format and provided to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; or</p> <p>(iii) be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder. 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Installation shall be in accordance with ISO 1100/1-1981 or equivalent and be undertaken by a suitably qualified person</p>	<p>The consent holder shall, within six months of the first exercise of this consent:</p> <p>(a) (i) install a water meter(s) that has an international accreditation or an equivalent New Zealand calibration endorsement suitable for use with an electronic recording device, from which the rate and the volume of water taken can be determined to within an accuracy of plus or minus five percent or 10 percent at a location(s) that will ensure the total take of water from [insert waterbody name] is measured; and</p> <p>(ii) install a tamper-proof electronic recording device such as a data logger that shall record (or log) the flow totals every 15 minutes and have the capacity to hold at least one season's (as specified in conditions (XXX) and (XXX) (XXX)) data of water taken as specified in clause (b) (ii), or which is telemetered, as specified in clause (b)(iii).</p> <p>(b) The water meter and recording device(s) shall:</p> <p>(i) be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and</p> <p>(ii) store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which shall be downloaded and stored in a commonly used format and provided to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; or</p> <p>(iii) be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder. No data in the recording device(s) shall be deliberately changed or deleted.</p> <p>(c) The measuring device shall be installed at a site that retains a stable rating (i.e. a man-made channel, concrete, steel or fibreglass pipe). Installation shall be in accordance with ISO 1100/1-1981 or equivalent and be undertaken by a suitably qualified person</p>	<p>For replacement & hybrid applicants have said that metering and recording has been installed within 6 months of the first exercise of the consent.</p> <p>Comment [c5]: +/- 5% for piped systems with +/- 10% for open channels</p> <p>Comment [c7]: +/- 5% for piped systems with +/- 10% for open channels</p> <p>Comment [c6]: Only need this condition 4(a) of MIC set of conditions if you have stockwater as part of the applications</p> <p>Comment [c8]: Only need this condition 4(a) of MIC set of conditions if you have stockwater as part of the applications.</p>
8. The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval.	The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval.	The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval	
9. The water meter and recording device(s) shall be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.	The water meter and recording device(s) shall be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.	The water meter and recording device(s) shall be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.	
10. All practicable measures shall be taken to ensure that the water meter and recording device(s) are at all times fully functional and have an accuracy standard of ±5% .	All practicable measures shall be taken to ensure that the water meter and recording device(s) are at all times fully functional and have an accuracy standard of plus or minus five percent or 10 percent	All practicable measures shall be taken to ensure that the water meter and recording device(s) are at all times fully functional and have an accuracy standard of plus or minus five percent or 10 percent	<p>Comment [c9]: +/- 5% for piped systems with +/- 10% for open channels</p> <p>Comment [c10]: +/- 5% for piped systems with +/- 10% for open channels</p>
<p>11. The consent holder shall, within one month of any water meter and recording device(s) being installed, or within one month of any water meter and/or recording device(s) being replaced, and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, provide a certificate to the Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:</p> <p>(a) the water meter and recording device(s) has been installed in accordance with the manufacturers specifications; and</p> <p>(b) data from the recording device can be readily accessed and/or retrieved in accordance with conditions (XXX) and (XXX).</p>	<p>The consent holder shall, within one month of any water meter and recording device(s) being installed, or within one month of any water meter and/or recording device(s) being replaced, and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, provide a certificate to the Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:</p> <p>(a) the water meter and recording device(s) has been installed in accordance with the manufacturers specifications; and</p> <p>(b) data from the recording device can be readily accessed and/or retrieved in accordance with conditions (XXX) and (XXX).</p>	<p>The consent holder shall, within one month of any water meter and recording device(s) being installed, or within one month of any water meter and/or recording device(s) being replaced, and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, provide a certificate to the Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:</p> <p>(a) the water meter and recording device(s) has been installed in accordance with the manufacturers specifications; and</p> <p>(b) data from the recording device can be readily accessed and/or retrieved in accordance with conditions (XXX) and (XXX).</p>	



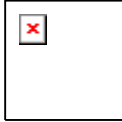
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
12. The water allocated for irrigation and stockwater in conditions (XXX) and/or (XXX) will be metered, recorded and reported to the Canterbury Regional Council in accordance with conditions (XXX), (XXX), (XXX), (XXX) and (XXX)			For UWAG haven't included MIC's condition 12 as it is already set out within other conditions and appears to be repetitious.
13. The Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) shall be informed immediately on first exercise of this consent by the consent holder.	The Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) shall be informed immediately on first exercise of this consent by the consent holder	The Canterbury Regional Council (Attention: RMA Compliance and Enforcement Manager) shall be informed immediately on first exercise of this consent by the consent holder	
Water Use Conditions			
1. Water for irrigation shall only be used on or applied to land that is subject to a memorandum of encumbrance that complies with the requirements of the agreement entitled "Agreement in Relation to the Allocation of Water for Irrigation" between Meridian Energy Limited and the Mackenzie Irrigation Company Limited dated the 31 st of October 2006.	Water for irrigation shall only be used on or applied to land that is subject to a memorandum of encumbrance that complies with the requirements of the agreement entitled "Agreement in Relation to the Allocation of Water for Irrigation" between Meridian Energy Limited and the Mackenzie Irrigation Company Limited dated the 31 st of October 2006.		
2. The consent holder shall, six months prior to this consent being exercised, provide to the Canterbury Regional Council a certificate from the Consent Holder's solicitor certifying that the memorandum of encumbrance provided for in Condition 1 is registered on the computer registers for the land shown on Plan X, and any other evidence of registration as the Canterbury Regional Council may require (if any).	The consent holder shall, six months prior to this consent being exercised, provide to the Canterbury Regional Council a certificate from the Consent Holder's solicitor certifying that the memorandum of encumbrance provided for in Condition 1 is registered on the computer registers for the land shown on Plan X, and any other evidence of registration as the Canterbury Regional Council may require (if any).		
		Within five years of the first exercise of this consent all wild flooding and dyke irrigation shall cease.	Comment [c11]: This condition has some major ramifications. The consent holder is required to provide the certificate of encumbrance at least 6 MONTHS BEFORE the exercise of the consent. Ewan, I know this is part of derogation approval, but if consent is granted just before irrigation season 2011 this will mean that the UWAG guys are unable to irrigate during the 2011 irrigation season.....
3. The consent holder shall, at all times, take all practicable steps to: <ul style="list-style-type: none"> (b) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; (c) Avoid leakage from pipes and structures; and (d) Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips. (e) If the irrigation system used to distribute water taken in terms of this permit is used to distribute effluent, fertiliser or any other added contaminant, a backflow preventer manufactured in accordance with AS 2845.1 (1998) or the American Society of Sanitary Engineers standards shall be installed within the pump outlet plumbing or within the mainline, to prevent the backflow of water containing contaminants into the fresh water source. (f) The backflow preventer shall be tested to the standard set out in AS 2845.3 (1993) or an equivalent method within one month of its installation and annually thereafter by a suitably qualified independent person. A test report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within two weeks of each inspection. 	The consent holder shall, at all times, take all practicable steps to: <ul style="list-style-type: none"> (a) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; (b) Avoid leakage from pipes and structures; and (c) Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips. (d) If the irrigation system used to distribute water taken in terms of this permit is used to distribute effluent, fertiliser or any other added contaminant, a backflow preventer manufactured in accordance with AS 2845.1 (1998) or the American Society of Sanitary Engineers standards shall be installed within the pump outlet plumbing or within the mainline, to prevent the backflow of water containing contaminants into the fresh water source. (e) The backflow preventer shall be tested to the standard set out in AS 2845.3 (1993) or an equivalent method within one month of its installation and annually thereafter by a suitably qualified independent person. A test report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within two weeks of each inspection. 	The consent holder shall, at all times, take all practicable steps to: <ul style="list-style-type: none"> (a) Ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; (b) Avoid leakage from pipes and structures; and (c) Avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips. (d) If the irrigation system used to distribute water taken in terms of this permit is used to distribute effluent, fertiliser or any other added contaminant, a backflow preventer manufactured in accordance with AS 2845.1 (1998) or the American Society of Sanitary Engineers standards shall be installed within the pump outlet plumbing or within the mainline, to prevent the backflow of water containing contaminants into the fresh water source. (e) The backflow preventer shall be tested to the standard set out in AS 2845.3 (1993) or an equivalent method within one month of its installation and annually thereafter by a suitably qualified independent person. A test report shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within two weeks of each inspection. 	



MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>4. Prior to the commencement of irrigation under this consent the consent holder shall:</p> <p>(a) Prepare and implement a groundwater monitoring plan for the purpose of confirming the distribution of flow between the groundwater and surface water at sub-catchment [insert relevant node]. This shall generally be in accordance with the plan described in the [insert relevant report]. The period of monitoring must include one year of data gathering prior to the commencement of irrigation under this consent.</p> <p>(b) Provide a report to the Canterbury Regional Council on the groundwater monitoring results, including:</p> <p>(i) a summary of the data collected; and</p> <p>(ii) a description and assessment of the level of variance in the groundwater distribution from the expected outcomes reported in the [insert relevant report].</p> <p>The calculation of (ii) shall be by the method set out in Appendix B.</p> <p>(c) Prepare and implement a periphyton monitoring plan that includes monthly monitoring at each sub-catchment node [insert relevant node] for the purpose of establishing the current maximum annual periphyton biomass at those nodes. This shall include flow gauging, nutrient analysis and periphyton biomass and composition. The period of the monitoring must include one year of data gathering prior to the commencement of irrigation under this consent.</p> <p>(d) Provide a report to the Canterbury Regional Council on the periphyton monitoring results, including:</p> <p>(i) a summary of the data collated;</p> <p>(ii) the current maximum annual periphyton biomass at the node;</p> <p>(iii) quantify a 25% increase in annual periphyton biomass above the current maximum at the node; and</p> <p>(iv) the farm nutrient loads that would result from a 25% maximum annual periphyton at the node ("maximum annual periphyton load").</p> <p>The calculation of (ii) and (iii) shall be by the method set out in Appendix C.</p> <p>(e) Prepare and implement a monitoring plan for the purpose of confirming total farm nutrient loading (N and P). The period of monitoring must include one year of data gathering prior to the commencement of irrigation under this consent.</p> <p>(f) Provide a monitoring report to the Canterbury Regional Council that includes the following:</p> <p>(i) an estimate of the annual average existing N and P discharges from the farm using a minimum of 3 years of information, including the information from the 12 month monitoring period required by (e) above ("existing total farm nutrient loading");</p> <p>(ii) an estimate of the proposed nutrient loading that would occur as a product of the proposed farming system to be adopted (as described in the Farm Environmental Management Plan), including proposed mitigation ("proposed farm nutrient loading"); and</p> <p>(iii) the sum of the existing and the proposed nutrient loading ("total farm nutrient loading").</p> <p>The calculations for (i), (ii) and (iii) shall be derived in accordance with the method set out in Appendix D.</p>	<p>Where more than 10% of the total property is to be irrigated, except as required by clause (c), prior to the commencement of irrigation under this consent the consent holder shall:</p> <p>(a) Prepare and implement a monitoring plan which is implemented for a period of not less than one year, for the purpose of confirming the groundwater and surface water interactions within sub-catchment [insert relevant node] generally accords with the plan described in the [insert relevant report]</p> <p>(b) Upon completion of the monitoring undertaken in accordance with the plan prepared in clause (a) the consent holder shall prepare a report including:</p> <p>(i) A assessment undertaken by a suitably qualified person as to whether the groundwater and surface water interactions within sub-catchment [insert relevant node] generally accords with the plan described in the [insert relevant report]; or</p> <p>(ii) Where there groundwater and surface water is within sub-catchment [insert relevant node] does not in generally accord with the plan described in the [insert relevant report] an assessment undertaken by a suitably qualified person as to the level of variance in the groundwater and surface water interactions from the expected outcomes; a proposed total farm nutrient discharge allowance ("NDA"), including any adjustment where necessary and the significance of the variance</p> <p>(c) The monitoring outlined in the plan described in clause (a) above shall be undertaken for the duration of the consent.</p> <p>NOTE: All calculations shall be undertaken in accordance with the methods set out within Appendix B</p> <p>(d) Prepare and implement a monthly monitoring plan which is implemented for a period of not less than one year, for the purpose of establishing the current maximum annual periphyton biomass at the sub-catchment node [insert relevant node] which shall include:</p> <p>(i) flow gauging,</p> <p>(ii) how the nutrient analysis is to be undertaken; and</p> <p>(iii) how periphyton biomass and composition is to be determined.</p> <p>(e) Upon completion of the monitoring undertaken in accordance with the plan prepared in clause (c) the consent holder shall prepare a report including:</p> <p>(i) An assessment undertaken by a suitably qualified person including:</p> <p>(aa) the current maximum annual periphyton biomass at the node; and</p> <p>(bb) quantify a 25% increase in annual periphyton biomass above the current maximum at the node; and</p> <p>(cc) an assessment of the farm nutrient loads that would result from a 25% maximum annual periphyton at the node ("maximum annual periphyton load");</p> <p>(ii) An assessment as to whether [insert farm] the total nutrient loading will result in an exceedance of the maximum annual periphyton levels as set out within Table 3 Appendix A. This assessment shall include any adjustments required by the monitoring results outlined in Clause (d) (i).</p> <p>NOTE: All calculation s shall be undertaken in accordance with the method set out in Appendix C.</p> <p>(f) Prepare and implement a monitoring plan which is implemented for a period of not less than one year, for the purpose of confirming total farm nutrient loading (N and P) for [insert relevant property].</p>		<p>Comment [c12]: Ewan this is a random figure, but from looking at the majority of hte "big ones" of UWAG, they are irrigating less than 10% of their property....</p> <p>included.</p>

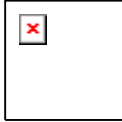


MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>(g) Prepare and implement a farm environmental monitoring plan for the purpose of identifying on farm conditions, including groundwater and surface water quality prior to the commencement of irrigation. This will form part of the monitoring requirements set out in Section [x] of the Farm Environmental Management Plan (FEMP) for [insert property].</p>	<p>(g) Upon completion of the monitoring undertake in accordance with the plan prepared in clause (e) the consent holder shall prepare a report including:</p> <ul style="list-style-type: none"> (i) an estimate by a suitably qualified person of the annual average existing N and P discharges from the farm using a minimum of 3 years of information, including the information from the 12 month monitoring period required by (e) above ("existing total farm nutrient loading"); (ii) an estimate by a suitably qualified person of the proposed nutrient loading that would occur as a product of the proposed farming system to be adopted (as described in the Farm Environmental Management Plan), including proposed mitigation ("proposed farm nutrient loading"); and (iii) an assessment as to whether the existing and proposed nutrient loading is to be less than the total nutrient loading as set out within Table 1 Appendix A. <p>NOTE: All shall be undertaken in accordance with the method set out in Appendix D.</p> <p>(h) The report prepared in accordance with clauses (b), (e) and (g) shall include a recommendation as to whether the consent holder is able to commence irrigation.</p> <p>(i) Prior to commencing irrigation the consent holder shall provide this report to the Canterbury Regional Council.</p> <p>(j) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the monitoring plan and such notice shall not be withheld without good reason.</p> <p>(k)</p>		
<p>5. Copies of the monitoring plans (including the groundwater monitoring plan referred to in Condition 4(a), the periphyton monitoring plan in Clause 4(c) and the farm environmental monitoring plan in Clause 4(g)) must be provided to the Canterbury Regional Council for certification at least 20 working days prior to implementation of the plans.</p>	<ul style="list-style-type: none"> (a) Where a monitoring plan is required by condition XXX, the consent holder shall provide the Canterbury Regional Council with copies of the monitoring plans to show compliance with condition XXX, in particular clauses (a), (d) and (f). (b) The monitoring plan referred to in clause (a), above shall be provided to the Canterbury Regional Council not less than 20 working days prior to its implementation; (c) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the monitoring plan and such notice shall not be withheld without good reason. (d) 		<p>For UWAG applicants which are replacement or hybrids this conditions has not been included.</p>
<p>6. The consent holder may not commence irrigation under this consent unless:</p> <ul style="list-style-type: none"> (a) In relation to [insert specified farm] groundwater distribution generally accords with the [insert relevant report]; (b) The existing and proposed nutrient loading is estimated to be less than the total nutrient loading set out in Table 1 Appendix A; and (c) In relation to [insert specified farm], the total nutrient loading is not estimated to result in an exceedance of the maximum annual periphyton levels set out in Table 3 Appendix A (as adjusted in accordance with condition 4(d)(iv)). 			<p>For UWAG applicants this condition has been incorporated into the amended MIC condition 4</p>
<p>7. If in the event that the variance in groundwater distribution is such that distribution does not generally accord with the [insert relevant report], then the consent holder shall provide to the Canterbury Regional Council for certification a report addressing the following matters:</p> <ul style="list-style-type: none"> (a) An assessment of the significance of the variance (if any); (b) A proposed and total farm nutrient discharge allowance ("NDA") (including any adjustment if necessary); and (c) A recommendation on whether the consent holder may commence irrigation land and if so, on what basis. 			<p>For UWAG applicants this condition has been incorporated into the amended MIC condition 4</p>

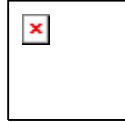


MWRL Proposed Conditions	UWAG - New	Replacement	Comments
8. In the event that the report provides a recommendation that the consent holder may commence irrigation and the report is certified by the Canterbury Regional Council, then the consent holder may commence irrigation in accordance with that recommendation.			For UWAG applicants this condition has been incorporated into the amended MIC condition 4
9. In the event that the Canterbury Regional Council notifies the consent holder that it does not accept the recommendation to commence irrigation contained in the report, it may review the conditions of the Consent, including but not limited to the condition 4(f).			Have not included this for UWAG applicants as it appears to be irrelevant
10. In the event that the report does not provide a recommendation that the consent holder may commence irrigation, or the recommendations are not acceptable to the consent holder, the consent holder may seek to vary the conditions of consent to allow commencement of the Consent.			Have not included this as a condition of consent as able to do this pursuant to S127 of the Act.
11. In conjunction with the sub catchment and Lakes monitoring and reportage required by conditions 28 to 43, the consent holder shall continue the groundwater monitoring and reporting required by condition 4(a) and 4(b) during the exercise of the consent. Conditions 7, 8, 9 and 10 shall apply with all necessary modifications.			For UWAG applicants this condition has been incorporated into the amended MIC condition 4
13. The consent holder shall implement the on site Farm Environmental Management Plan (FEMP) for [property] which is attached as Appendix E and forms part of this consent. The objectives of the FEMP are to: <ul style="list-style-type: none"> (a) Illustrate that the proposed farm system for [Insert Property/Farm Name] can meet the nutrient discharge allowances requirements set out in table 1 of Appendix A, and contribute to the achievement of the sub catchment nutrient discharge thresholds; and (b) Identify and mitigate other farm specific environmental risks that are unique to [Insert Property/Farm Name] and the farm management system that is proposed for this property. (c) Include Mandatory Good Agricultural Practices (MGAPs) that are to be implemented across the farm. (d) Construct a representative farm model and demonstrate the fulfilment of the nutrient mitigation requirements. (e) Develop an appropriate onsite monitoring and auditing plan for [property]. May want to remove this as already set out above. 	<p>The consent holder shall prepare and implement a Farm Environmental Management Plan (FEMP) for [property]. The FEMP shall include</p> <ul style="list-style-type: none"> (a) Nutrient budget prepared to confirm [Insert Property/Farm Name] can meet the nutrient discharge allowances requirements set out in Table 1 of Appendix A; (b) The nutrient budget shall be prepared by the 31 August each year for the coming 12 month period using an appropriate model, such as OVERSEER, by a suitably qualified person to ensure that property [insert property name] is able to comply with Nutrient Discharge Allowances (NDA's) as identified in Table 1 or Table 1 (a) Appendix A. (c) When undertaking the modelling outlined in clause (b), the consent holder shall <ul style="list-style-type: none"> (i) use typical farm practices undertaken in the previous 3 year period; (ii) use either weather records collected on farm or from constructed data from the nearest weather station. (d) A property specific environmental risk assessment prepared by a suitably qualified person which identifies and mitigates any farm specific environmental risks; (e) The Mandatory Good Agricultural Practices (MGAPs) that are to be implemented across the property. (f) The consent holders shall record farm management practices, such as cultivation, nutrient inputs, stock movements, yields. 	<p>The consent holder shall prepare and implement a Farm Environmental Management Plan (FEMP) for [property]. The FEMP shall include</p> <ul style="list-style-type: none"> (g) Nutrient budget prepared to confirm [Insert Property/Farm Name] can meet the nutrient discharge allowances requirements set out in Table 1 of Appendix A; (h) The nutrient budget shall be prepared by the 31 August each year for the coming 12 month period using an appropriate model, such as OVERSEER, by a suitably qualified person to ensure that property [insert property name] is able to comply with Nutrient Discharge Allowances (NDA's) as identified in Table 1 or Table 1 (a) Appendix A. (i) When undertaking the modelling outlined in clause (b), the consent holder shall <ul style="list-style-type: none"> (i) use typical farm practices undertaken in the previous 3 year period; (ii) use either weather records collected on farm or from constructed data from the nearest weather station. (j) A property specific environmental risk assessment prepared by a suitably qualified person which identifies and mitigates any farm specific environmental risks; (k) The Mandatory Good Agricultural Practices (MGAPs) that are to be implemented across the property. (a) The consent holders shall record farm management practices, such as cultivation, nutrient inputs, stock movements, yields. 	
14. The consent holder shall ensure that the recommended site specific management measures outlined in the FEMP for [property] are adhered to, including the preparation and implementation of the on farm environmental monitoring plan, and the annual preparation of an auditing plan for [property] .			For UWAG applicants this condition has not been recommended as it appears to be addressed in the above condition.
15. The annual auditing process required in condition XXX and outlined in the FEMP which is attached to and forms part of this consent shall include the preparation of a report to be submitted to the Canterbury Regional Council.	<ul style="list-style-type: none"> (a) The FEMP shall be audited annually annual by an independent suitably qualified person. (b) A report shall be prepared by the suitably qualified person outlining the findings and recommendations of the annual report. (c) Any recommendations identified shall be implemented within 12 months from the date of receipt of the report. (d) A copy of the report shall be given to the Canterbury Regional Council within 3 months of the report being completed. 	<ul style="list-style-type: none"> (a) The FEMP which is attached as Appendix 1 and forms part of this consent shall be audited annually annual by an independent suitably qualified person. (b) A report shall be prepared by the suitably qualified person outlining the findings and recommendations. (c) Any recommendations identified shall be implemented within 12 months from the date of receipt of the report. (d) A copy of the report shall be given to the Canterbury Regional Council within 3 months of the report being completed. 	

Comment [c13]: Ewan I have incorporated Appendix x D into this conditions.



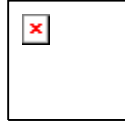
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>16. The consent holder may without changing the objectives of a FEMP seek the approval of the Canterbury Regional Council for any necessary amendment to such a plan on the following terms:</p> <p>(a) The review shall be undertaken in consultation with and be approved by the Canterbury Regional Council.</p> <p>(b) Such review is necessary to give effect to the purpose of the FEMP for [Insert Property/Farm Name].</p>	<p>(a) The consent holder shall annually review the FEMP and amend where necessary to reflect any significant land use changes.</p> <p>(b) Where the FEMP has been amended, the consent holder will provide the amended FEMP to the Canterbury Regional Council within a certificate signed by a suitably qualified person which certifies the amendments made do not change the objectives of the FEMP;</p> <p>(c) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the amended FEMP plan and such notice shall not be withheld without good reason.</p> <p>(d) .</p> <p><i>Advisory note</i></p> <p><i>For the purpose of this consent "significant land use changes" is a major change in the way in which the farm operates. For example going from extensive sheep and beef farming to dairy farming or cropping. It does not include changes in stock numbers as a would be expected under "normal" farming operations.</i></p>	<p>(a) The consent holder shall annually review the FEMP and amend where necessary to reflect any significant land use changes.</p> <p>(b) Where the FEMP has been amended, the consent holder will provide the amended FEMP to the Canterbury Regional Council within a certificate signed by a suitably qualified person which certifies the amendments made do not change the objectives of the FEMP;</p> <p>(c) Upon receipt of any amended FEMP the Canterbury Regional Council shall give written notice to the consent holder that it accepts the amended FEMP and such notice shall not be withheld without good reason.</p> <p><i>Advisory note</i></p> <p><i>For the purpose of this consent "significant land use changes" is a major change in the way in which the farm operates. For example going from extensive sheep and beef farming to dairy farming or cropping. It does not include changes in stock numbers as a would be expected under "normal" farming operations.</i></p>	<p>For UWAG applicants this condition has been significantly amended so that changes to the FEMP can be made without having to get ECan to approve these changes.</p>
<p>17. The consent holder shall pay all actual and reasonable costs incurred by the Canterbury Regional Council in connection with its review of the FEMP for [Insert Property/Farm Name].</p>			<p>For UWAG applicants haven't included this conditions as would expect that a standard "admin" condition would be imposed.</p>
<p>18. The FEMP and nutrient discharge allowances set out in Table 1 Appendix A shall apply to [Insert Property/Farm Name] and to any subsequent landholdings resulting from the subdivision of that property (including the partitioning of land from, or addition of land to that property holding) so long as that landholding relies on this consent. Should any changes to the land holding occur, the FEMP shall be reviewed and updated in consultation with and be approved by the Canterbury Regional Council to recognise the changed land area.</p>	<p>(a) The FEMP and nutrient discharge allowances set out in Table 1 Appendix A shall apply to [Insert Property/Farm Name] and to any subsequent landholdings resulting from the subdivision of that property (including the partitioning of land from, or addition of land to that property holding) so long as that landholding relies on this consent.</p> <p>(b) Should any changes to the land holding occur, the FEMP shall be reviewed and updated</p> <p>(c) The consent holder will provide the amended FEMP to the Canterbury Regional Council within a certificate signed by a suitably qualified person which certifies the amendments made reflect the changes in landholding.</p> <p>(d) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the FEMP and such notice shall not be withheld without good reason .</p> <p>(e)</p>	<p>(a) For the first five years of the exercise of this consent the FEMP and nutrient discharge allowances set out in Table 1 (a) Appendix A shall apply to [Insert Property/Farm Name] and to any subsequent landholdings resulting from the subdivision of that property (including the partitioning of land from, or addition of land to that property holding) so long as that landholding relies on this consent.</p> <p>(b) Following the first five years of the exercise of this consent, the FEMP and nutrient discharge allowances set out in Table 1 Appendix A shall apply to [Insert Property/Farm Name] and to any subsequent landholdings resulting from the subdivision of that property (including the partitioning of land from, or addition of land to that property holding) so long as that landholding relies on this consent.</p> <p>(c) Should any changes to the land holding occur, the FEMP shall be reviewed and updated</p> <p>(d) The consent holder will provide the amended FEMP to the Canterbury Regional Council within a certificate signed by a suitably qualified person which certifies the amendments made reflect the changes in landholding.</p> <p>(e) Upon receipt of any amended FEMP the Canterbury Regional Council shall give written notice to the consent holder that it accepts the amended FEMP and such notice shall not be withheld without good reason.</p>	<p>For UWAG applicants this condition has been significantly amended so that changes to the FEMP can be made without having to get ECan to approve these changes.</p>
<p>19. The consent holder shall ensure that fertiliser is applied in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07'. Fertiliser spreaders shall be tested and calibrated by the consent holder at least annually, and every 5 years by an independent and appropriately qualified auditor and the results of testing shall be provided to the Canterbury Regional Council by 30 September each year.</p>	<p>(a) The consent holder shall ensure that all land based fertiliser is applied in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates.</p> <p>(b) For land based spreading of fertiliser an accredited fertiliser spreading company (such as Fertmark or Spreadmark) shall be used to spread any fertiliser on the property except as provided for by clause (d) below.</p> <p>(c) Where an accredited fertiliser spreading company is used the consent holder shall keep a record of the company used which can be supplied to the Canterbury Regional Council upon request.</p> <p>(d) Where uncertified fertiliser spreaders are used, the consent holder shall test and calibrate the fertiliser spreaders least annually, and every 5 years the fertiliser spreader will be certified by a suitably qualified person in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates and the results of testing shall be provided to the Canterbury Regional Council upon request.</p>	<p>(a) The consent holder shall ensure that all land based fertiliser is applied in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates.</p> <p>(b) An accredited fertiliser spreading company (such as Fertmark or Spreadmark) shall be used to spread any fertiliser on the property except as provided for by clause (d) below.</p> <p>(c) Where an accredited fertiliser spreading company is used the consent holder shall keep a record of the company used which can be supplied to the Canterbury Regional Council upon request.</p> <p>(d) Where uncertified fertiliser spreaders are used, the consent holder shall test and calibrate the fertiliser spreaders least annually, and every 5 years the fertiliser spreader will be certified by a suitably qualified person in accordance with 'The Code of Practice for Nutrient Management (With Emphasis on Fertiliser Use) NZFMRA 07' or any subsequent updates and the results of testing shall be provided to the Canterbury Regional Council upon request.</p>	<p>Comment [c14]: Ewan I have only looked at land based as the code of practice does not cover areal application which does occur up there.</p>



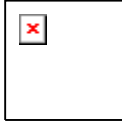
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
20. The consent holder shall ensure that all new irrigation infrastructure is designed and certified by a suitably qualified independent expert, and installed in accordance with the certified design. Copies of certified design documents shall be provided to the Canterbury Regional Council.	(a) The consent holder shall ensure that all new irrigation infrastructure is designed and certified by a suitably qualified independent expert, and installed in accordance with the certified design. (b) Copies of certified design documents shall be provided to the Canterbury Regional Council upon request. (c) The consent holder shall ensure that all new irrigation infrastructure is tested and calibrated by the consent holder once within 12 months of it being installed and operated and then thereafter every five years in accordance with the Code of Practice for Irrigation Evaluation 2005 by a suitably qualified person. (d) A report shall be prepared by the suitably qualified person outlining the findings and recommendations. (e) Any recommendations identified shall be implemented within 12 months from the date of receipt of the report. (f) A copy of the report shall be given to the Canterbury Regional Council within 3 months of the report being completed	(a) The consent holder shall ensure that all new irrigation infrastructure is designed and certified by a suitably qualified independent expert, and installed in accordance with the certified design. (b) Copies of certified design documents shall be provided to the Canterbury Regional Council upon request. (c) The consent holder shall ensure that all new irrigation infrastructure is tested and calibrated by the consent holder once within 12 months of it being installed and operated and then thereafter every five years in accordance with the Code of Practice for Irrigation Evaluation 2005 by a suitably qualified person. (d) A report shall be prepared by the suitably qualified person outlining the findings and recommendations. (e) any recommendations identified shall be implemented within 12 months from the date of receipt of the report. (f) A copy of the report shall be given to the Canterbury Regional Council within 3 months of the report being completed	
21. If existing irrigation infrastructure is being used, the consent holder shall obtain an evaluation report prepared by a suitably qualified, independent expert. The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation. This report shall be obtained within three months of the first exercise of the consent. Any recommendations identified in the report shall be implemented within five years from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council.	(a) If existing irrigation infrastructure is being used, the consent holder shall obtain an evaluation report prepared by suitably qualified person. (b) The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation. (c) This report shall be obtained within three months of the first exercise of the consent. (d) Any recommendations identified in the report shall be implemented within five years from the date of receipt of the report. (e) A copy of the report shall be forwarded to the Canterbury Regional Council within 3 months of the report being completed.	(a) If existing irrigation infrastructure is being used, the consent holder shall obtain an evaluation report prepared by suitably qualified person. (b) The evaluation shall determine the system's current performance in accordance with the Code of Practice for Irrigation Evaluation. (c) This report shall be obtained within three months of the first exercise of the consent. (d) Any recommendations identified in the report shall be implemented within five years from the date of receipt of the report. (e) A copy of the report shall be forwarded to the Canterbury Regional Council within 20 working days of receipt of the report.	
22. The consent holder shall ensure that all irrigation infrastructure shall be tested once within 12 months of the first exercise of this consent and then thereafter every 5 years in accordance with the Code of Practice for Irrigation Evaluation by a suitably qualified, independent expert. The independent expert shall prepare a report outlining findings and recommendations. Any recommendations identified shall be implemented within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council within 3 months of the report being completed.			For UWAG applicants have incorporated this condition into the "new irrigation infrastructure" conditions. Reason being that if left as is does not mesh well with existing irrigation infrastructure which allows implementation of changes to occur over a 5 year period.
23. The consent holder shall maintain ongoing and complete records for [Insert Property/Farm Name] in relation to the type of crop, cultivation methods, nutrient inputs, stock movements and yields. Such records are to be used as inputs to the approved method (such as OVERSEER) as described in condition 5 , and shall be made available to the Canterbury Regional Council on request.			For UWAG applicants this condition has not been included as it is already required under the MIC
24. The consent holder shall ensure that nitrogen fertiliser is not applied to land between 31 st May and 1 st September in any year except for the use of nitrification inhibitors.	The consent holder shall ensure that nitrogen fertiliser is not applied to land between 31 st May and 1 st September in any year except for the use of nitrification inhibitors	The consent holder shall ensure that nitrogen fertiliser is not applied to land between 31 st May and 1 st September in any year except for the use of nitrification inhibitors	

Comment [c15]: Condtion 5 is all about Pre Irrigaiton moniotroing Plans. Think have the wrong conditon number here.

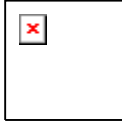
Comment [c16]: Keri - could you check with that Ellis-Lea is able to comply with this type of conditon as they are likley to be the only ones who are impacted by such a conditon.



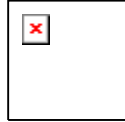
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>25. The consent holder shall ensure that fertiliser (organic and inorganic) applications and spreaders are tested and calibrated annually by the consent holder and then thereafter every 5 years by a suitably qualified independent auditor. The independent certified auditor shall report the coefficient of variation before and after tester calibration and advise the consent holder of recommendations should a transverse coefficient of variation of 85 % not be achieved. Any recommendations identified shall be implemented within 12 months from the date of receipt of the report. A copy of the report shall be given to the Canterbury Regional Council within 3 months of it being completed. Consent holders using 'Spreadmark' accredited spreaders or contractors are compliant with this condition and shall present evidence of the spreadmark accreditation instead..</p>	<p>Where the irrigation system is used in association with taking water in terms of this permit to distribute effluent, fertiliser or any other added contaminant or a stand alone system, such as a travelling effluent irrigator, is used to distribute effluent, fertiliser or any other contaminant the consent holder shall:</p> <p>(a) Within 12 months of first time the irrigation system and/or stand alone system is used to distribute effluent, fertiliser or any other added contaminant and then thereafter every 5 years the consent holder shall have the irrigations system tested and calibrated by a suitably qualified person in accordance with the effluent code of practice;</p> <p>(b) The suitably qualified person shall prepare a report outlining findings and recommendations.</p> <p>(c) Any recommendations identified shall be implemented within 12 months from the date of receipt of the report.</p> <p>(d) A copy of the report shall be given to the Canterbury Regional Council within 3 months of it being completed.</p>	<p>Where the irrigation system is used in association with taking water in terms of this permit to distribute effluent, fertiliser or any other added contaminant or a stand alone system, such as a travelling effluent irrigator, is used to distribute effluent, fertiliser or any other contaminant the consent holder shall:</p> <p>(a) Within 12 months of first time the irrigation system and/or stand alone system is used to distribute effluent, fertiliser or any other added contaminant and then thereafter every 5 years the consent holder shall have the irrigations system tested and calibrated by a suitably qualified person in accordance with the effluent code of practice;</p> <p>(b) The suitably qualified person shall prepare a report outlining findings and recommendations.</p> <p>(c) Any recommendations identified shall be implemented within 12 months from the date of receipt of the report.</p> <p>(d) A copy of the report shall be given to the Canterbury Regional Council within 3 months of it being completed.</p>	<p>For UWAG applicants this condition has not been included as it is already spelt out within the amended MIC condition 14. This would only apply if looking at discharging effluent to land.</p>
<p>26. The consent holder shall ensure that all fertiliser brought onto the property which is not immediately applied to the land is stored in a covered area that incorporates all practicable measures to prevent the fertiliser entering waterways.</p>	<p>The consent holder shall ensure that all fertiliser brought onto the property which is not immediately applied to the land is stored in a covered area that incorporates all practicable measures to prevent the fertiliser entering water.</p>	<p>The consent holder shall ensure that all fertiliser brought onto the property which is not immediately applied to the land is stored in a covered area that incorporates all practicable measures to prevent the fertiliser entering water.</p>	
<p>27. The consent holder shall identify within the property at least one fertiliser filling area the identified fertiliser area shall be at least 50m from a watercourse, spring or bore and will have no drains that discharge to clean water or that can discharge directly to ground. This area shall be utilised for the filling of all plant or machinery utilised for fertiliser spreading.</p>			<p>For UWAG applicants this hasn't been included as it is addressed in the condition above.</p>
<p>28. If liquid fertilisers, excluding liquid effluent, are used, the consent holder shall ensure that the fertiliser is stored in a bunded tank, at least 110% of the volume of the tank to avoid any discharge to surface or groundwater and such that it is also protected from vehicle movements.</p>	<p>If liquid fertilisers, excluding liquid effluent, are stored on-site for more than three working days, the consent holder shall ensure that the fertiliser is stored in a bunded tank, at least 110% of the volume of the tank to avoid any discharge to surface or groundwater and such that it is also protected from vehicle movements.</p>	<p>If liquid fertilisers, excluding liquid effluent, are stored on-site, the consent holder shall ensure that the fertiliser is stored in a bunded tank, at least 110% of the volume of the tank to avoid any discharge to surface or groundwater and such that it is also protected from vehicle movements.</p>	<p>For UWAG applicants have amended this condition so that only need to bund liquid fertiliser where they are being stored on site as think it is impracticable for trucks to be bunded.</p>



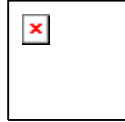
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>29. Prior to the exercise of this consent the consent holder shall prepare a sub catchment monitoring plan with respect to the necessary off farm monitoring as outlined in the Table 2 in Appendix A.</p> <p>(i) This sub catchment monitoring plan may be prepared in collaboration with other consent holders who are required to prepare a sub catchment monitoring plan for this sub catchment in order to better achieve integrated management.</p> <p>(ii) The sub catchment monitoring plan shall demonstrate how the consent holder will undertake monitoring to achieve the nutrient discharge allowances set out in Table 1 in Appendix A.</p> <p>(iii) The sub catchment monitoring plan shall specify an appropriate methodology for conducting all off farm monitoring.</p> <p>(iv) The sub catchment monitoring plan shall be submitted to Canterbury Regional Council for certification. The consent holder shall implement this plan from the date upon which this consent is implemented and shall continue the monitoring for the duration of the consent.</p> <p>(v) The sub catchment monitoring plan will set out the methods by which the data will be collected and analysed by a qualified independent person/group.</p> <p>(vi) This monitoring may be carried out on an individual or on a collective basis by a suitable independent body appointed by all relevant consent holders in the sub catchment and approved by the Canterbury Regional Council.</p> <p><i>Advice Note: If the monitoring is undertaken by a collective independent body then all necessary costs associated with this monitoring shall be met by the consent holders within the sub catchment on a basis proportional to the area of land that they irrigate within the catchment.</i></p>	<p>(a) Prior to the exercise of this consent the consent holder shall prepare and implement a sub catchment monitoring plan [insert node] to show compliance with the nutrient discharge allowances set out in Table 2 in Appendix A. which includes:</p> <p>(i) An appropriate methodology for monitoring sub catchment [insert appropriate note]; and</p> <p>(ii) methods by which the data will be collected and analysed; and</p> <p>(iii) how the results of the monitoring will be reported.</p> <p>(b) If the sub catchment monitoring plan outlined in clause (a) is prepared in collaboration with other consent holders who are required to prepare a sub catchment monitoring plan for this sub catchment the sub catchment monitoring plan shall be deemed to comply with this condition.</p> <p>(c) The consent holder will provide to the Canterbury Regional Council a copy of the sub catchment monitoring plan. This plan shall be provided not less than 20 working days prior to undertaking the sub catchment monitoring. If the sub catchment monitoring plan has been undertaken in accordance with clause (b) above, only one copy of the sub catchment monitoring plan needed to be provided to the Canterbury Regional Council;</p> <p>(d) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the sub catchment monitoring plan and such notice shall not be withheld without good reason.</p> <p>(e)</p> <p><i>Advice Note: If the monitoring is undertaken by a collective independent body then all necessary costs associated with this monitoring shall be met by the consent holders within the sub catchment on a basis proportional to the consented area of land that they irrigate within the catchment.</i></p>	<p>(a) Within six months of the exercise of this consent the consent holder shall prepare and implement a sub catchment monitoring plan [insert node] o show compliance with the nutrient discharge allowances set out in Table 1 in Appendix A. which includes:</p> <p>(i) An appropriate methodology for monitoring sub catchment [insert appropriate note]; and</p> <p>(ii) methods by which the data will be collected and analysed; and</p> <p>(iii) how the results of the monitoring will be reported.</p> <p>(b) If the sub catchment monitoring plan outlined in clause (a) is prepared in collaboration with other consent holders who are required to prepare a sub catchment monitoring plan for this sub catchment the sub catchment monitoring plan shall be deemed to comply with this condition.</p> <p>(c) The consent holder will provide to the Canterbury Regional Council a copy of the sub catchment monitoring plan. This plan shall be provided not less than 20 working days prior to undertaking the sub catchment monitoring. If the sub catchment monitoring plan has been undertaken in accordance with clause (b) above, only one copy of the sub catchment monitoring plan needed to be provided to the Canterbury Regional Council;</p> <p>(d) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the sub catchment monitoring plan and such notice shall not be withheld without good reason.</p> <p>(e)</p> <p><i>Advice Note: If the monitoring is undertaken by a collective independent body then all necessary costs associated with this monitoring shall be met by the consent holders within the sub catchment on a basis proportional to the consented area of land that they irrigate within the catchment</i></p>	<p>Comment [c17]: This one only applies to applicants who are within a node to monitor. Those who drain directly into the lakes do not need to do this....</p>
<p>30. If the monitoring undertaken in accordance with the sub catchment monitoring plan in condition 29 indicates that the nodal readings of dissolved inorganic nitrogen, and/or dissolved reactive phosphorus and/or periphyton biomass have exceeded 90% of the thresholds limit specified in Table 3 of Appendix A then the sampling frequency at that node shall be increased to weekly and notification of the exceedance shall be provided to the Canterbury Regional Council within 2 days of it being recorded.</p>	<p>(a) If the monitoring undertaken in accordance condition XXX indicates an exceeded 90% of the thresholds limit specified in Table 3 of Appendix A then the following shall occur:</p> <p>(i) a review of compliance with FEMP's of all properties within the sub catchment [insert node]; and</p> <p>(ii) as a result of this review the consent holder is found to be non compliant with the FEMP the consent holder shall either</p> <p>(aa) immediately implement measure to ensure compliance with the FEMP; and/or</p> <p>(bb) undertake review the FEMP in accordance with conditions XXX (the annual review condition)</p> <p>and</p> <p>(iii) increase sampling frequency at that node to _____;</p> <p>(b) Any exceedance and measures undertaken to address the exceedance shall be reported to the Canterbury Regional Council within 5 working days</p>	<p>(a) If the monitoring undertaken in accordance condition XXX indicates an exceeded 90% of the thresholds limit specified in Table 3 of Appendix A then the following shall occur:</p> <p>(i) a review of compliance with FEMP's of all properties within the sub catchment [insert node]; and</p> <p>(ii) as a result of this review the consent holder is found to be non compliant with the FEMP the consent holder shall either</p> <p>(aa) immediately implement measure to ensure compliance with the FEMP; and/or</p> <p>(bb) undertake review the FEMP in accordance with conditions XXX (the annual review condition)</p> <p>and</p> <p>(iii) increase sampling frequency at that node to _____;</p> <p>(b) Any exceedance and measures undertaken to address the exceedance shall be reported to the Canterbury Regional Council within 5 working days</p>	<p>Comment [c18]: Ewan I think some increased frequency of monitoring needs to be undertaken here to see whether the 90% is as result of FEMP breach or something else. But agree that weekly is a bit over the top!!!</p>



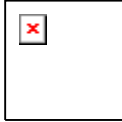
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>31. If the increased monitoring undertaken in accordance with condition 30 determines that the average of five consecutive weekly results exceeds 90% of all or any one of the threshold limits specified in Table 3 in Appendix A then a report shall be prepared by two appropriately qualified and independent experts, one of which is to be appointed by the Canterbury Regional Council and the other by the consent holder. The report prepared shall be provided to the Canterbury Regional Council within one month of the receipt of such results. The purpose of the report shall be to determine whether or not the cause of the exceedance is likely to be because of natural influences, one off events, or land use practices. The report shall include an assessment of the likely reasons for the observed increase in nutrient levels, including likely source and contributors (natural sources, or land use influences). The report shall include an evaluation as to whether there is likely to be a continuation of the monitored results and whether the results are likely to trend toward an outright exceedance of the threshold limit over time..</p>	<p>(a) If the monitoring undertaken in accordance with condition XXX clause (iii) shows five consecutive results less than 90% of the threshold limits specified in Table 3 in Appendix A at the sub catchment node [insert node] then no further action is to be undertaken by the consent holder.</p> <p>(b) If the monitoring undertaken in accordance with condition XXX clause (iii) shows five consecutive results exceeding 90% of the threshold limits specified in Table 3 in Appendix A at the sub catchment node [insert node] then a report shall be prepared by two appropriately qualified and independent experts, one of which is to be appointed by the Canterbury Regional Council and the other by the consent holder.</p> <p>(c) The report shall:</p> <p>(i) determine whether the exceedances are as a result of natural influences, one off events, or land use practices; and</p> <p>(ii) an assessment as to whether there is likely to be a continuation of the monitored results; and</p> <p>(iii) shall be prepared within 40 working days of the two experts referred to in clause (a) being appointed.</p> <p>(d) If the report prepared in accordance with clauses (a) and (b) determines that the thresholds set out within Table 3 Appendix A at the sub catchment node [insert node] have been exceeded by an event outside the control of the consent holder then no further action is to be undertaken by the consent holder.</p> <p>(e) If the report prepared in accordance with clauses (a) and (b) determines that there is a trend to less the thresholds set out within Table 3 Appendix A at the sub catchment node [insert node] then no further action is to be undertaken by the consent holder.</p> <p>(f) If the report prepared in accordance with clauses (a) and (b) determines that the thresholds set out within Table 3 Appendix A at the sub catchment node [insert node] are likely to be exceeded then the consent holder shall prepare a Remedial Action Plan.</p> <p>(g) The Remedial Action Plan shall set out the methods and timeframes for altering and/or adapting farm practices to ensure that the exceedance in nutrient threshold limits under Table 3 of Appendix A for sub catchment [insert node] are returned to and maintained below the threshold limits for that node for the subsequent irrigation seasons.</p> <p>(h) The Remedial Action Plan shall be prepared by a suitably qualified person using approved methods, such as OVERSEER, to show that the actions to be undertaken will achieve the necessary nutrient reductions;</p> <p>(i) If the Remedial Action Plan outlined in clause (f) is prepared in collaboration with other consent holders who are required to prepare a the Remedial Action Plan for this sub catchment node [insert node] the Remedial Action Plan shall be deemed to comply with this condition</p> <p>(j) Any actions required by the Remedial Action Plan shall be incorporated into the consent holders FEMP. The amended FEMP shall be immediately implemented.</p> <p>(k) The consent holder shall proved the Canterbury Regional Council with the Remedial Action Plan and an amended FEMP within 30 working days of the report referred to in clause (b) being received.</p> <p>(l) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the Remedial Action Plan and amended FEMP and such notice shall not be withheld without good reason.</p> <p>(m)</p> <p><i>Advice Note: If the monitoring is undertaken by a collective independent body then all necessary costs associated with this monitoring shall be met by the consent holders within the sub catchment on a basis proportional to the consented area of land that they irrigate within the catchment.</i></p>	<p>(a) If the monitoring undertaken in accordance with condition XXX clause (iii) shows five consecutive results less than 90% of the threshold limits specified in Table 3 in Appendix A at the sub catchment node [insert node] then no further action is to be undertaken by the consent holder.</p> <p>(b) If the monitoring undertaken in accordance with condition XXX clause (iii) shows five consecutive results exceeding 90% of the threshold limits specified in Table 3 in Appendix A at the sub catchment node [insert node] then a report shall be prepared by two appropriately qualified and independent experts, one of which is to be appointed by the Canterbury Regional Council and the other by the consent holder.</p> <p>(c) The report shall:</p> <p>(i) determine whether the exceedances are as a result of natural influences, one off events, or land use practices; and</p> <p>(ii) an assessment as to whether there is likely to be a continuation of the monitored results; and</p> <p>(iii) shall be prepared within 40 working days of the two experts referred to in clause (a) being appointed.</p> <p>(d) If the report prepared in accordance with clauses (a) and (b) determines that the thresholds set out within Table 3 Appendix A at the sub catchment node [insert node] have been exceeded by an event outside the control of the consent holder then no further action is to be undertaken by the consent holder.</p> <p>(e) If the report prepared in accordance with clauses (a) and (b) determines that there is a trend to less the thresholds set out within Table 3 Appendix A at the sub catchment node [insert node] then no further action is to be undertaken by the consent holder.</p> <p>(f) If the report prepared in accordance with clauses (a) and (b) determines that the thresholds set out within Table 3 Appendix A at the sub catchment node [insert node] are likely to be exceeded then the consent holder shall prepare a Remedial Action Plan.</p> <p>(g) The Remedial Action Plan shall set out the methods and timeframes for altering and/or adapting farm practices to ensure that the exceedance in nutrient threshold limits under Table 3 of Appendix A for sub catchment [insert node] are returned to and maintained below the threshold limits for that node for the subsequent irrigation seasons.</p> <p>(h) The Remedial Action Plan shall be prepared by a suitably qualified person using approved methods, such as OVERSEER, to show that the actions to be undertaken will achieve the necessary nutrient reductions;</p> <p>(i) If the Remedial Action Plan outlined in clause (f) is prepared in collaboration with other consent holders who are required to prepare a the Remedial Action Plan for this sub catchment node [insert node] the Remedial Action Plan shall be deemed to comply with this condition</p> <p>(j) Any actions required by the Remedial Action Plan shall be incorporated into the consent holders FEMP. The amended FEMP shall be immediately implemented.</p> <p>(k) The consent holder shall proved the Canterbury Regional Council with the Remedial Action Plan and an amended FEMP within 30 working days of the report referred to in clause (b) being received.</p> <p>(l) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the Remedial Action Plan and amended FEMP and such notice shall not be withheld without good reason.</p> <p>(m)</p> <p><i>Advice Note: If the monitoring is undertaken by a collective independent body then all necessary costs associated with this monitoring shall be met by the consent holders within the sub catchment on a basis proportional to the consented area of land that they irrigate within the catchment.</i></p>	



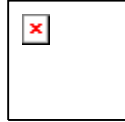
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>32. If the monitoring and reporting undertaken in accordance with condition 31 predicts a trend toward an exceedance of the threshold limit over time and that the consent holder is either solely or partly responsible for the exceedance of all or any one of the threshold limits under Table 3 in Appendix A then:</p> <p>(a) the consent holder shall prepare a Remedial Action Plan to ensure the threshold limit/s is/are not exceeded. This report shall be submitted to the Canterbury Regional Council within one month of the completion of the report prepared in accordance with condition 31.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 31</p>
<p>33. The Remedial Action Plan shall prescribe the methods and timeframes for altering and/or adapting farm practices on one or more of the farms within the affected sub catchment to ensure that the exceedance in nutrient threshold limit/s under Table 3 of Appendix A at the affected node site are returned to and maintained at a level that is below the threshold limit/s identified in Table 3 in Appendix A for the subsequent irrigation seasons. The Remedial Action Plan shall illustrate, via an approved method such as OVERSEER, that the recommended actions will deliver the required nutrient reductions from the farm or farms. The Remedial Action Plan shall be reviewed by an appropriately qualified independent expert prior to being submitted to Canterbury Regional Council.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 31</p>
<p>34. Once the Remedial Action Plan prepared in accordance with condition 33 has been received by the Canterbury Regional Council, the consent holder shall immediately implement any necessary changes to on farm management practices required by the Remedial Action Plan. The consent holder shall ensure that the farm management practices recommended by the Remedial Action Plan in accordance with condition 33 are incorporated into their approved farm nutrient modelling when determining compliance with their Nutrient Discharge Allowance.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 31</p>
<p>35. If the report required in accordance with condition 31 finds that there is not likely to be a continuation of the monitored results or that the results do not predict a trend toward an outright exceedance of the threshold limits over time, no further remedial action is required.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 31</p>
<p>36. If the monitoring undertaken in accordance with the sub catchment monitoring plan prepared under condition 29 indicates that any or all of the nutrient threshold limit/s outlined in the Table 3 of Appendix A above have been exceeded then:</p> <p>(a) The sampling frequency at that node shall be increased to weekly; and</p> <p>(b) If the average of five consecutive weekly results exceeds the thresholds limit/s in Table 3 of Appendix A above then notification shall be provided to the Canterbury Regional Council within one week of it being recorded. A report shall be prepared by an appropriately qualified independent expert and provided to the Canterbury Regional Council within one month of the receipt of such results. The report shall include an assessment of the likely reasons for the observed increase in nutrient levels, including likely source and contributors.</p>			<p>For UWAG applicants haven't included this as it is covered by amended MIC condition 31.</p>
<p>37. If the monitoring and reporting undertaken in accordance with conditions 31 and 32 determine that the consent holder is either solely or partly responsible for the threshold limit exceedance then:</p> <p>(a) the consent holder shall immediately take steps to reduce their actual or planned N and P losses (depending on the nutrient that has caused the breach) by 5% for the year that is current (May to May), or which commences subsequent to the identification of the exceedance;</p> <p>(b) the consent holder shall prepare, on either a collective or individual basis, a Remedial Action Plan, for the certification of Canterbury Regional Council within one month of the notification required under condition 32.</p>			



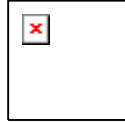
MWRL Proposed Conditions	UWAG - New	Replacement	Comments
38. The Remedial Action Plan shall prescribe the methods and timeframes for altering and/or adapting farm practices on one or more of the farms within the affected sub catchment to ensure that the exceedance in nutrient threshold limit/s under Table 3 of Appendix A at the affected node are returned to and maintained at a level that is below the threshold limit/s identified in Table 3 for the subsequent irrigation seasons. The Remedial Action Plan shall illustrate, via an approved method such as OVERSEER, that the recommended actions will deliver the required nutrient reductions from the farm or farms. The Remedial Action Plan shall be reviewed by an appropriately qualified independent expert prior to being submitted to Canterbury Regional Council.			
39. Once the Remedial Action Plan prepared in accordance with condition 38 has been certified by the Canterbury Regional Council, the consent holder shall implement immediately any necessary changes to on farm management practices required by the Remedial Action Plan. The consent holder shall ensure that the farm management practices recommended by the Remedial Action Plan in accordance with condition 38 are incorporated into their approved farm nutrient modelling when determining compliance with their Nutrient Discharge Allowance. The consent holder shall also update their FEMP to include changes in farm management to be adopted in accordance with condition 38. 40.			



MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>41. Prior to the exercise of this consent the consent holder shall prepare (name lake) monitoring plan in accordance with the methodology in Appendix F with respect to the necessary monitoring as outlined in Table 4 of Appendix A below:</p> <p>(a) This (name) lake monitoring plan may be prepared in collaboration with other consent holders who are required to prepare a lake monitoring plan in order to better achieve integrated management.</p> <p>(b) The (name) lake monitoring plan shall specify any pre-consent implementation monitoring required to confirm baseline conditions. The consent holder shall implement the plan as it relates to pre-consent implementation upon receipt of the plan by Environment Canterbury.</p> <p>(c) The (name) lake monitoring plan shall specify an appropriate methodology for conducting all lake monitoring including identifying monitoring necessary in the (name) Arm of (name) lake that is subject to any downstream discharge from [Insert Property/Farm Name].</p> <p>(d) The (name) lake monitoring plan will set out the methods by which the data will be collected and analysed by a qualified independent person/group.</p> <p><i>Advice Note: If the Upper Waitaki Lake monitoring is undertaken on a collective basis then all necessary costs associated with this monitoring shall be met by the consent holders on a proportional basis.</i></p> <p><i>Where costs are to be met on a proportional basis, this means that an individual consent holder shall meet costs according to a ratio which accounts for the proportion of land irrigated by that consent holder as a percentage of all land irrigated in the Upper Waitaki Catchment.</i></p>	<p>(a) Prior to the exercise of this consent the consent holder shall prepare a Lake Benmore monitoring plan in accordance with the methodology in Appendix F.</p> <p>(b) If the Lake Benmore monitoring plan outlined in clause (a) is prepared in collaboration with other consent holders who are required to prepare a the Lake Benmore monitoring plan this shall be deemed to comply with this condition.</p> <p>(c) If the monitoring undertaken in accordance with clause (a) indicate that the triggers in Table 5 of Appendix A pertaining to the [name] Arm of lake [name] or the [name] lake itself have been exceeded, then the consent holder shall appoint an expert review panel consisting of two qualified and independent experts to review the likely cause of the exceedence. One of the scientists is to be appointed by the Canterbury Regional Council, and the other by the consent holder.</p> <p>(d) The expert panel referred to in clause (c) shall prepare a report to:</p> <p>(i) determine whether the exceedence are as a result of natural influences, one off events, or land use practices; and</p> <p>(ii) an assessment as to whether there is likely to be a continuation of the monitored results; and</p> <p>(iii) shall be prepared within 40 working days of the two experts referred to in clause (c) being appointed.</p> <p>(e) If the report prepared in accordance with clauses (c) and (d) determines that the thresholds set out within Table 5 Appendix A have been exceeded by an event outside the control of the consent holder, or it is unlikely that there is a trend towards exceedence of threshold limits specified in Table 5 in Appendix A pertaining to the [name] Arm of lake [name] or the [name] lake itself then no further action is to be undertaken by the consent holder.</p> <p>(f) If the report prepared in accordance with clauses (c) and (d) determines that the thresholds set out within Table 5 Appendix A are likely to be exceeded then the consent holder shall prepare a Remedial Action Plan.</p> <p>(g) The Remedial Action Plan shall set out the methods and timeframes for altering and/or adapting farm practices to ensure that the exceedence in nutrient threshold limits under Table 5 in Appendix A pertaining to the [name] Arm of lake [name] or the [name] lake itself are returned to and maintained below the threshold limits for that node for the subsequent irrigation seasons.</p> <p>(h) The Remedial Action Plan shall be prepared by a suitably qualified person using approved methods, such as OVERSEER to show that the actions to be undertaken will achieve the necessary nutrient reductions;</p> <p>(i) If the Remedial Action Plan outlined in clause (g) is prepared in collaboration with other consent holders who are required to prepare a the Remedial Action Plan for this sub catchment the Remedial Action Plan shall be deemed to comply with this condition</p> <p>(j) Any actions required by the Remedial Action Plan shall be incorporated into the consent holders FEMP. The amended FEMP shall be immediately implemented.</p> <p>(k) The consent holder shall provide the Canterbury Regional Council with the Remedial Action Plan and an amended FEMP within 30 working days of the report referred to in clause (d) being received.</p> <p>(l) The Canterbury Regional Council shall give written notice to the consent holder within 10 working days that it accepts the Remedial Action Plan and amended FEMP and such notice shall not be withheld without good reason.</p> <p>(m)</p> <p><i>Advice Note: If the monitoring is undertaken by a collective independent body then all necessary costs associated with this monitoring shall be met by the consent holders within the sub catchment on a basis proportional to the consented area of land that they irrigate within the catchment.</i></p>		



MWRL Proposed Conditions	UWAG - New	Replacement	Comments
<p>42. Should the lake monitoring undertaken in accordance with condition 40 indicate that the triggers in Table 5 of Appendix A pertaining to the [name] Arm of lake [name] or the [name] lake itself have been exceeded, then the consent holder shall appoint an expert review panel consisting of two qualified and independent experts to review the likely cause of the exceedance. One of the scientists is to be appointed by the Canterbury Regional Council, and the other by the consent holder. The expert panel shall prepare a report within one month of the breach, and the purpose of the report shall be to determine the likely cause of the exceedance. The report shall be submitted to the Canterbury Regional Council upon its completion.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 41</p>
<p>43. If the report undertaken in accordance with condition 41 determines that the consent holder is either solely or partly responsible for the threshold limit exceedance, then the consent holder shall prepare, on either a collective or individual basis, a remedial action plan. The extent to which the actions emanating from this Plan apply to any given consent holder in the catchment shall depend on the exceedance detected and whether this has occurred in a Lake Arm and the effect is confined to that Arm or whether the effect has presented more widely within the Lake. The Plan shall be completed within one month of the completion of the report required by condition 41.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 41</p>
<p>44. The Remedial Action Plan shall prescribe the methods and timeframes for altering and/or adapting farm practices on one or more of the farms within the affected lake arm or lake catchment to ensure that the exceedance in nutrient threshold limit/s under Table 3 at the affected lake monitoring site are returned to and maintained at a level that is below the threshold limit/s identified for the subsequent irrigation seasons. The Remedial Action Plan shall illustrate, via an approved method such as OVERSEER, that the recommended actions will deliver the required nutrient reductions from the farm or farms. The Remedial Action Plan shall be reviewed by an appropriately qualified independent expert prior to being submitted to Canterbury Regional Council.</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 41</p>
<p>45. Once the Remedial Action Plan prepared in accordance with condition 41 has been certified by the Canterbury Regional Council, the consent holder shall implement immediately any necessary changes to on farm management practices required by the Remedial Action Plan. The consent holder shall ensure that the farm management practices recommended by the Remedial Action Plan in accordance with condition 43 are incorporated into their approved farm nutrient modelling when determining compliance with their Nutrient Discharge Allowance. The consent holder shall also be required to update their FEMP to include changes in farm management to be adopted in accordance with condition 41</p>			<p>For UWAG applicants this condition has been included in the amended MIC condition 41</p>
<p>46. Subject to conditions 30 and 41, the consent holder may exercise this consent provided that:</p> <ul style="list-style-type: none"> (a) Groundwater distribution generally accords with the [insert report]; (b) The proposed NDA is estimated to equal or to be less than the proposed NDA in Table 1 of Appendix A as adjusted in accordance with condition 4(f); (c) Compliance with the environmental thresholds in Table 3 of Appendix A (sub nodal thresholds). 			<p>For UWAG applicants haven't included as these aspects are covered by other conditions.</p>
<p>47. For a period of 5 years from the commencement of irrigation, the farm operations may only utilise up to 80% of the proposed farm nutrient discharge allowance for N and P set out in Table 1 Appendix A.</p>			<p>For UWAG applicants haven't included as none are looking at staging</p>
<p>48. Subject to compliance with the environmental thresholds in Table 3 of Appendix A in the first five years of operation, the consent holder may then utilise 100% of the proposed farm nutrient discharge.</p>			<p>For UWAG applicants haven't included as none are looking at staging</p>

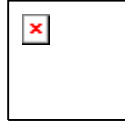


MWRL Proposed Conditions	UWAG - New	Replacement	Comments
49. If the environmental thresholds in Table 3 of Appendix A have not been complied with during the first five year period, due in part or in whole to the farming operations of the consent holder, the consent holder shall provide a report with recommendations on the most appropriate future proposed NDA (the "Staging report") to the Canterbury Regional Council for certification and approval.			For UWAG applicants haven't included as none are looking at staging
50. If the Staging report is approved by the Canterbury Regional Council, the consent holder may exercise the consent in accordance with those recommendations contained in the Staging report provided that this complies with any other applicable condition of consent. Such report must be completed with 3 months of the end of the fifth year of irrigation under this consent.			For UWAG applicants haven't included as none are looking at staging
51. If the recommendations of the Staging report are not approved by the Canterbury Regional Council, the Canterbury Regional Council may immediately commence a review of the conditions of the consent including but not limited to conditions [xx] to [xx].			For UWAG applicants haven't included as none are looking at staging
52. If the recommendations of the Staging report are not acceptable to the consent holder, then the consent holder may: (a) exercise the consent only with the approval of the Canterbury Regional Council, and/or (b) seek a variation to the conditions of the consent including but not limited to the NDA thresholds.			For UWAG applicants haven't included as none are looking at staging
	<p>Lake Minimum flows</p> <p>The taking of water for irrigation from [insert lake], shall cease whenever the level of [insert lake] falls below [insert minimum lake level] metres above mean sea level as estimated by the Canterbury Regional Council at map reference [xxx].</p>		
	<p>River/Stream Minimum flows</p> <p>Where abstraction point is located upstream of minimum flow monitoring point</p> <p>The taking of water for irrigation from [insert river/stream], shall cease whenever the flow in [insert river/stream], as estimated by the Canterbury Regional Council, at map reference [xxx], falls below 30 litres per second.</p> <p>Where abstraction point is located downstream of minimum flow monitoring point</p> <p>Whenever the flow (expressed in litres per second) in [insert river], as estimated by the Canterbury Regional Council at map reference [insert minimum flow monitoring point]:</p> <p>(a) is equal or greater than [xxx] litres per second the maximum rate at which water is taken, shall not exceed [rate of take] litres per second.</p> <p>(b) falls below the flow shown on the horizontal axis of the annexed graph, then the rates of abstraction permitted in terms of this permit shall not exceed those shown as corresponding on the vertical axis of the annexed graph.</p> <p>(c) falls below [minimum flow] litres per second, the taking of water in terms of this permit shall cease.</p>		



MWRL Proposed Conditions	UWAG - New	Replacement	Comments
	<p>(a) A fish exclusion device shall be installed, operated and maintained on the intake to ensure that fish are as far as is practicable, prevented from passing into the intake;</p> <p>(b) The fish exclusion device shall be position to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the fish screening device;</p> <p>(c) Prior to the exercise of this consent, the consent holder shall provide to the Canterbury Regional Council a certificate signed by the designer or supplier of the fish exclusion device confirming that the fish screen has as far as is practicable been designed and installed in accordance with Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007 as amended to reflect the point of take.</p> <p>(d) The fish exclusion device shall be maintained in good working order.</p> <p>Where existing intake with fish screen (i.e. Totara Peaks & Graham)</p> <p>Where there is an intake with an existing fish screen</p> <p>(a) The fish screen shall be inspected by a suitably qualified person within six months of the first exercise of this consent, who shall ensure that the fish screen as far as is practicable prevents fish from passing into the intake;</p> <p>(b) A copy of the inspection report shall be provided to the Canterbury Regional Council, within one month of the date of inspection;</p> <p>(c) Where the inspection report recommended changes to be made to the fish screen, the consent holder shall ensure the recommendations of the report are undertaken within 12 months of the date of the inspection;</p> <p>(d) The fish screen shall be maintained in good working order.</p>	<p>Where there is an intake with an existing fish screen</p> <p>(a) The fish screen shall be inspected by a suitably qualified person within six months of the first exercise of this consent, who shall ensure that the fish screen as far as is practicable prevents fish from passing into the intake;</p> <p>(b) A copy of the inspection report shall be provided to the Canterbury Regional Council, within one month of the date of inspection;</p> <p>(c) Where the inspection report recommended changes to be made to the fish screen, the consent holder shall ensure the recommendations of the report are undertaken within 6 months of the date of the inspection;</p> <p>(d) The fish screen shall be maintained in good working order.</p> <p>Existing intake with no fish screen</p> <p>(a) Within 12 months of the fist exercise of this consent a fish exclusion device shall be installed, operated and maintained on the intake to ensure that fish are as far as is practicable, prevented from passing into the intake;</p> <p>(b) The fish exclusion device shall be position to avoid the entrapment of fish at the point of abstraction, and to minimise the risk of fish being damaged by contact with the screen face;</p> <p>(c) Within six months of the exercise of this consent, the consent holder shall provide to the Canterbury Regional Council a certificate signed by the designer or supplier of the fish exclusion device confirming that the fish screen has as far as is practicable been designed and installed in accordance with Fish Screening: Good Practice Guidelines for Canterbury, NIWA Client Report 2007-092, October 2007 as amended to reflect the point of take.</p> <p>(d) The fish exclusion device shall be maintained in good working order.</p>	

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APPENDIX A

Table 1 – Proposed Nutrient Discharge Allowance

<u>Existing N & P Discharges from this farm (kg/yr) (a)</u>	<u>Proposed Total N & P Discharge allowance from this Farm (with irrigation) (kg/year) (b)</u>	<u>Total P Discharge from this farm (kg/year Total Farm) N & P Discharge Allowance (kg/yr) (Post Irrigation) (a & b)</u>

Table 1 (a) –Nutrient Discharge Allowance for the first five years

<u>Existing N & P Discharges from this farm (kg/yr) (a)</u>	<u>Proposed Total N & P Discharge allowance from this Farm (with irrigation) (kg/year) (b)</u>	<u>Total P Discharge from this farm (kg/year Total Farm) N & P Discharge Allowance (kg/yr) (Post Irrigation) (a & b)</u>

Table 2 – Sub Catchment Monitoring

	Monitoring Type	Parameter to be measured	Sites to be monitored	Frequency of monitoring
Groundwater	Quality	[Insert details]	[Insert details]	[Insert details]
Surface water	Quality	[Insert details]	[Insert details]	[Insert details]
	Quantity	[Insert details]	[Insert details]	[Insert details]
	Ecology	[Insert details]	[Insert details]	[Insert details]

Table 3 –Sub Catchment Nutrient Threshold Limits for [Property/Farm]

Node	Reference Location	Dissolved Reactive Phosphorous	Dissolved Inorganic Nitrogen	Periphyton Biomass
	[Insert details]	[Insert thresholds]		

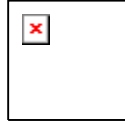


Table 4 – Upper Waitaki Lake Monitoring

Lake	Monitoring Type	Parameter to be measured	Sites to be monitored	Frequency of monitoring
Lake Benmore, Lake Ruataniwha, and Wairepo Arm	Quality	Vertical profile of temperature, dissolved oxygen, pH, total nitrogen, total phosphorous, ammonia, nitrate, nitrite, total Kjeldahl nitrogen, dissolved reactive phosphorous, Secchi depth, Chlorophyll-a	Lake Benmore, Ahuriri Arm, Northern Arm, and near Benmore Dam, Lake Ruataniwha and Wairepo Arm of Lake Ruataniwha.	Monthly
	Lake sediment	Total nitrogen, total phosphorous		Every 3 years
	Ecology	Benthic invertebrates, macrophytes, fish and phytoplankton.		Annually Phytoplankton quarterly

Table 5 – Lake Triggers

Lake	Triggers
Lake Benmore,	TLI value =

APPENDIX B

[Insert Groundwater Monitoring Plan]

APPENDIX C

Equations* to calculate the current maximum annual periphyton biomass at a given node and to quantify a 25% increase in annual periphyton biomass above the current maximum at a given node.

Case A: Where soluble inorganic nitrogen (SIN) is limiting periphyton growth.

$$\text{Log}_{10} (\text{maximum chl. a in mg/m}^2) = 4.285 \times (\text{Log}_{10} \text{ days of accrual}) - 0.929 \times (\text{Log}_{10} \text{ days of accrual})^2 + (0.504 \times \text{Log}_{10} \text{ SIN}) - 2.946 \quad r^2 = 0.741 \quad (1)$$

Case B: Where soluble reactive phosphorus (SRP) is limiting periphyton growth.

$$\text{Log}_{10} (\text{maximum chl. a in mg/m}^2) = 4.716 \times (\text{Log}_{10} \text{ days of accrual}) - 1.076 \times (\text{Log}_{10} \text{ days of accrual})^2 + (0.494 \times \text{Log}_{10} \text{ SRP}) - 2.741 \quad r^2 = 0.721 \quad (2)$$

*Biggs, B. J. F., 2000: New Zealand Periphyton Guideline: Detecting, Managing and Monitoring Enrichment of Streams. A NIWA Report prepared for the Ministry of the Environment, June, 2000