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The Mark of Success

Sustainable Dairying: Water Accord

Audit Standard (DairyNZ requirements) v5, April 2014.

Audit Standard (Dairy Company requirements) v7, May 2014.

September- November 2014



Assessment Scope

Companies assessed: DairyNZ
Fonterra Co-operative Group Limited
Synlait Limited
Miraka Limited
Open Country Dairy Limited
Tatua Co-Operative Dairy Company Limited
Ravensdown Fertiliser Co-operative Limited
Ballance Agri-Nutrients Limited

Audit Standards: Sustainable Dairying: Water Accord Audit Standards:
• Audit Standard (DairyNZ requirements) v5, April 2014.
• Audit Standard (Dairy Company requirements) v7, May 2014.

Date of Audit: September- November 2014

Audit Team: Andrew Shaw – Senior Auditor
andrew.shaw@telarc.co.nz
Marie Wimmers – Senior Auditor
marie.wimmers@telarc.co.nz

Date of Report: 2nd December 2014

Signatures:



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- Fonterra Co-operative Group Limited
- Synlait Limited
- Miraka Limited
- Open Country Dairy Limited
- Tatua Co-Operative Dairy Company Limited
- Ravensdown Fertiliser Co-operative Limited
- Ballance Agri-Nutrients Limited

Executive Summary

The Sustainable Dairying: Water Accord (the Accord), was developed and signed by the Accountable Partners and Supporting Partners in July 2013. The accord sets out specific expectations and commitments for the signatories and details what monitoring and reporting is to occur, by whom, and according to what timeframe. The Accord notes that although fixed timeframes are set, the nature of the issues means that the commitments are longer term and that the timeframes and commitments will require review over time.

A requirement of the Accord is that DairyNZ/DCANZ will collate monitoring and reporting information and report to DELG annually on progress against Accord commitments. This report is required to be audited in draft form by an independent third party and include a review of the validity of the systems and practices used for data collection by dairy companies and a check of the reliability of a sample of farm-level information (through on the ground verification of reported information). Subsequently, two audit standards were prepared to assess the Monitoring and Reporting requirements of the Accord – The Sustainable Dairying: Water Accord Audit Standard (DairyNZ Requirements) and the Sustainable Dairying: Water Accord Audit Standard (Dairy Company Requirements). These standards contain Accord criteria relating to the information required to be collected and reported, as well as criteria relating to the assessment of the robustness of systems used to gather the data and improve outcomes over time. Telarc SAI Ltd was engaged to assess DairyNZ and the Dairy Companies against these two standards. This report details the findings of this audit.

Before considering the assessment of the Accord requirements as detailed in the two Audit Standards, two key recommendations are made. Firstly, it was observed that although the Accord provided for a glossary of definitions, there was still significant variation across the Partners and Supporting Partners in the interpretation of some aspects of the Accord requirements. That is, there were different definitions used to report data relating to, for example, “waterways”, “water meters”, and “nutrient management plans”.

Key recommendation 1. It is recommended that The Dairy Environment Leadership Group (DELG) bring forward the first of the five yearly reviews of the Accord (currently scheduled for 2017) in order to address this variety and/or that agreement is sought between the Partners and Supporting Partners in the interpretation of all aspects of the Accord requirements.

Secondly, it was observed that the Partners and Supporting Partners primary focus was on meeting the requirements of the Accord, as opposed to the Accord Requirements as detailed in the two Audit Standards. It was further observed that there was not full alignment between the Accord requirements and the Accord reporting requirements. In addition, the audit standards assessed only the data to be monitored and reported as required by the Accord. For example, for waterways and drains, the Accord *calls for* “90% exclusion of the length present on dairy farms by 31 May 2014”. However, the Accord requires the dairy companies to *monitor and report* the “Length of stock excluded waterway”, which is what the audit standard assesses.

Key Recommendation 2. It is recommended that the Audit Standards are reviewed and fully aligned with both the monitoring and reporting requirements of the Accord, as well as the other measures the Accord requires of DairyNZ and Dairy Companies.

Sustainable Dairying: Water Accord Audit Standard (DairyNZ Requirements).

The review was performed in two parts: Firstly, a review of the Draft Sustainable Dairying: Water Accord Progress report for the 2013/14 season against data and information collected during a review of the dairy and fertiliser company processes, as well as on-farm verification visits. Secondly, a review of the requirements stated in the Sustainable Dairying: water Accord Audit Standard (DairyNZ requirements).

It was found that processes under the direct control of DairyNZ were well advanced and most of the Accord commitments have been achieved. There was significant evidence of the DairyNZ's well-considered design and development of tools and resources to enable full and timely completion of the commitments made in the Accord. Some of the management system requirements defined in the audit standard could be considered for further refinement and implementation by DairyNZ. DairyNZ's systems and processes to collect and qualify dairy company and supplier data could benefit from further refinement. Data and statements currently proposed to be reported could be reviewed and re-considered. Topics reported could be expanded and aligned between dairy companies and could include 3rd party grazing data and other data currently collected but not reported.

Areas where stronger leadership and coordination by DairyNZ could benefit the industry's achievement of Accord commitments were identified as:

- Raising the profiles, names and locations of significant wetlands.
- Clarifying definitions, roles and processes in the nutrient management domain.
- Coordinating a national mapping system to enable economies of scale and the more efficient management of data.
- Coordinating the reduction of the consented discharge of treated effluent to water on a national scale.

Sustainable Dairying: Water Accord Audit Standard (Dairy Company Requirements).

Dairy Companies have made progress with stock exclusion arrangements. However, data verification in some companies is ongoing and not yet complete. Future Accord commitments, such as measures to promote progressive riparian planting, riparian management plan development and applying the stock exclusion commitment to third party grazing are not yet key focus areas.

Collection of nutrient management data from 85% of all dairy farms (2013/14 Accord target) has not been completed. At the time of the audit, processing of the data had not been completed and as a consequence N loss and efficiency data was not yet available, nor had it been fully reported back to farmers. Assessment of all dairy farm effluent management systems have taken place; however, some challenges exist regarding development, implementation and close-out of improvement plans. The discharge of treated effluent to water was seen to be consent driven and there is variation across the regions in the type and range of permitted activities. There were different approaches to water use management and programmes were more evident on farms with regulatory drivers such as Variation 6 (in the Waikato area) and where water take was a consented requirement.

Dairy farm conversions were reviewed by all companies before being accepted as supplier farms. Water Accord related management processes within the dairy companies were in general adequate in terms of providing documents and records required for the verification audit. However, some formalisation could be beneficial. That is, some of the management

system requirements as defined in the audit standard could be considered for further refinement and implementation by the dairy companies.

Methodology

Methodology applied during the telarc audit of the 2013/2014 sustainable dairying: water accord commitments against the requirements of the audit standards.

References:

Content, guidance and information contained in the following sources were used as input to determine the methodology for the assessment.

1. Telarc proposal dated 28 July 2014.
2. Background information supplied in a document titled: "Sustainable Dairying: water Accord – 2013/14 Audit" by Mike Scarsbrook dated 18 August 2014.
3. Sample size calculation: ISO2859-1:1999 Table 1 (10 001 to 35 000 General inspection level II) & Table 4A code letter M.
4. Acceptance quality limit: ISO2859-1:1999 Table 4-A Sample code M First Sample.
5. Sustainable Dairying: Water Accord Audit Standard (DairyNZ Requirements) v5, April 2014.
6. Sustainable Dairying: Water Accord Audit Standard (Dairy Company Requirements) v7, May 2014.
7. Sustainable Dairying: Water Accord. A Commitment to New Zealand by the Dairy Sector. July 2013.

DairyNZ assessment:

During a two auditor one day assessment, processes at DairyNZ were assessed against the audit topics defined in the Water Accord Audit Standard (DairyNZ Requirements). An audit programme was used to guide the assessment. The draft DairyNZ/DCANZ Sustainable Dairying: Water Accord Progress report for the 2013/14 season was also reviewed. The Sustainable Dairying: Water Accord was used in this process as a cross reference to the audit requirements. This report details the clauses, and the observations and recommendations relating to the DairyNZ audit standard requirements.

Dairy company assessment:

The dairy company names and farm numbers provided in reference 2 as the proposed scope of work identified the dairy companies to be assessed, and the number of supply farms that were to be sampled.

Process assessment

One auditor day each was planned to be spent at the central offices of the Tatua, Open Country Dairy, Synlait and Miraka dairy companies, whilst four auditor days (two auditors for two days) was to be spent at the Fonterra Dairy Company central office. The Dairy Company Requirements of the Sustainable Dairying: Water Accord Audit Standard dictated the elements to be reviewed, and a specific audit assessment programme was created prior to visiting the central offices. Findings of these individual assessments have been recorded in documented reports (published as appendices to this report) and the cumulative findings for all the dairy companies collated into this report against each audit standard requirement.

On Farm Assessment

In addition to reviewing the Dairy Company Requirements of the Sustainable Dairying: Water Accord Audit Standard, it was determined that a selection of supplier farm environmental data was to be reviewed and checked against the data held by the dairy companies. This data consisted of both qualitative and quantitative attributes. The number of supplier farms to review was determined by the Standard: ISO 2859-1:1991 Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection. Assuming the number of farms (lot size) was within the range 10001-35001 and a general inspection level of II (in the absence of any audit standard requirements), a sample size of 80 was identified. This was to be made up of:

	Fonterra	OCD	Miraka	Synlait	Tatua
Farm audits	60	8	4	4	4

Under the requirements of the Standard (Section 11.1.2) if the number of non-conforming items was equal or greater to the second rejection number, the lot would not be considered acceptable. This approach was only used to select an initial sampling size and as an evaluation of AQL (Acceptable Quality Limit). No provision was made in the assessment plan to sample further if the first sample result was between the first acceptance and rejection limits, nor if any planned sampling did not occur, as this would require a further 80 farms to be reviewed, and possibly up to an additional 320 farms if the results continued to be within these limits. An additional 160 audit days was not viewed as tenable, or worthwhile.

At the time of supplier selection DairyNZ informed Telarc that no suppliers to Open Country Dairy would be reviewed. This absence of this sample data meant that the first AQL rejection limit would be triggered. It was then determined that the remaining samples would still be reviewed as part of the overall process and as a method of identifying areas for improvement.

Fonterra supplier farms were identified through a process of regionalised simple random selection from the Dairy NZ supplier levy database. The Hikurangi swamp area was excluded from selection due to the floods experienced in this area around the time of the selection process. Suppliers to the remaining dairy companies (Tatua, Miraka and Synlait) were randomly selected from a list of supplier numbers claimed to have Water Accord waterways on the farms. This resulted in the selection pools for each of these three dairy companies to contain less than 50% of all their suppliers. DairyNZ confirmed in writing that this approach was acceptable.

Recorded data for all the identified Tatua, Miraka and Synlait suppliers were reviewed during the central office assessments as well as during on-farm visits. In the case of Fonterra, it became an impractical task to attempt reviewing 60 sets of supplier records during the two day central office visit. The assessment team decided to randomly select 20 additional farms and review their records and the data consolidation processes (in addition to the onsite review of the 60 data sets that were to be reviewed as part of the Farm assessments). Results of these desktop supplier reviews are included in the Fonterra central office assessment report.

As in the selection of farms, the acceptance quality limits (AQL) defined in reference 4 (Tables 1 and 4A) were used to guide the data acceptance quality limits. During the central

office assessments it became clear that the AQL would not be achieved for the data related to the 2013/14 season. Time constraints as well as the nature of the rejects made re-sampling unviable.

The 60 Fonterra suppliers selected from the DairyNZ supplier levy database were visited by a team of three assessors. Ten Fonterra suppliers had short notice assessment cancellations. Five of the originally selected suppliers were replaced due to the supplier no longer working with Fonterra or not being available for assessment. A further five cancellations occurred during the assessment timeframe.

On farm assessments were arranged by dairy company representatives and a confirmation letter template contained an assessment overview and agenda. All on-farm assessments were hosted by the dairy company representatives, centred around the environmental codes on farm maps and focused on verification of the dairy company records about the specific supplier farm. An assessment report was created for each farm visit and is held in the Telarc archives. Results are included in the individual dairy company reports and this final report.

Fertiliser company assessments:

It was determined at the outset of the engagement process that there was some merit in reviewing the processes used by the two fertiliser supply companies to develop the nutrient budgets from the data supplied by the dairy companies. At the Ballance Agri-Nutrients and Ravensdown sites a process approach was used to review the nutrient budget creation. The assessment reviewed the data received by the companies and its subsequent manipulation to develop a nutrient budget and report the results to the Dairy Companies. Procedures for managing assumptions, data entry and verification/validation, as well as reporting were reviewed; in addition, an evaluation of the supporting management systems processes (document control, records management, internal audits, non conformance management etc.) was also performed.

Findings:

This report details observations where the current activities of the participants did not meet the requirements of the Audit Standard (DairyNZ requirements) v5, April 2014 or the Audit Standard (Dairy Company requirements) v7, May 2014. These are identified as Observations ("OBS"). Also included are Recommendations relating to current procedures and processes that the company may find useful when developing their processes and procedures in this area; these are identified by an "R". Appended to the report are individual feedback reports for the individual dairy companies and fertiliser suppliers that participated in the Audit. It is hoped that this feedback will be of benefit at the individual company level.

Report on Audit Standard (DairyNZ requirements)

Progress against the requirements of the Sustainable Dairying: Water Accord Audit Standard (DairyNZ Requirements) dated April 2014 as well as the content of the draft Sustainable Dairying: Water Accord Progress report for the 2013/14 season were reviewed and discussed with two DairyNZ representatives at the Ruakura DairyNZ facilities.

Audit standard requirements

Section 1: Riparian Management

1.1 Clause:

Systematically prepare (in partnership with regional councils) regionally tailored riparian management guidelines to promote stream health and water quality according to the following: Guidelines completed for:

- Three regions completed by 31 May 2014
- Nine regions by 31 May 2015
- All regions 31 May 2016

(Note: the preparation of guidelines will be prioritised according to the presence of priority catchments determined by the state of/risk to water quality and by the introduction of limits on contaminant loads from diffuse discharges.

Such guidelines will include recommended setback/planting width, planting density and plant species as well as the recommended means by which the extent of planting should be monitored.

Findings:

As part of the PGP programme, riparian management guidelines have been developed. (<http://www.dairynz.co.nz/what-we-do/investment/primary-growth-partnership/>). These are part of the Getting Riparian Planting Right - Regional Guides and can be found here: <http://www.dairynz.co.nz/environment/land-and-nutrient/waterways/>. e.g.

- [Getting riparian planting right in Southland - DairyNZ](#)
- [Getting riparian planting right in the Waikato - DairyNZ](#)

Priority Catchments were identified on the basis of risk. (Southland, Manawatu/Wanganui, the Waikato) Three regions were developed by 31 May 2014 and plans for Northland and Canterbury will be developed next.

Recommendation: It is recommended that DairyNZ consider applying version control and other appropriate document control arrangements to all these published guidelines.

1.2 Clause:

Report progress on the development of riparian management guidelines (reported biennially).

Findings:

A report has been completed reporting progress on riparian management guidelines. This has been circulated to DCANZ and then to DELG. This part of the Accord has been achieved as part of the regular reporting cycle of DairyNZ.

Section 2: Nutrient Management

2.1 Clause:

By 31 May 2013 develop an audited nitrogen management system that will enable dairy companies to model nitrogen loss on supplier dairy farms in a robust manner according to agreed protocols and consistent data collection systems.

Findings:

A nitrogen management system has been sourced and has been used by Dairy Companies to model nitrogen loss on supplier dairy farms. Overseer 6.1 (<http://www.overseer.org.nz/>) was the chosen tool. There is a dairy industry protocol (V2) utilised for this purpose. DairyNZ is a member of the Technical Advisory Group (TAG) for the Overseer tool. The dairy companies utilised fertiliser supply companies (e.g. Ballance Agri-Nutrients and Ravensdown Fertiliser Co-Operative) to manage and report on nutrient budgets using Overseer™. It was also identified that there were a small number of farm consultants that provided budgets. The assessment found that different methods for determining assumptions were used by the fertiliser companies in the absence of defined input data.

Observation: There has been no audited nitrogen management system developed by DairyNZ to assess the quality of the data and no internal review and approval system.

Recommendation: It was observed that there were a number of different versions of templates that were used by the various dairy companies to supply the data for the nutrient budgets. It is recommended that a common template for all providers of data is adopted.

Recommendation: While the nutrient budget teams had protocols for managing incomplete data, it was observed that different dairy companies had different expectations with regard to assumptions to be made when there was incomplete data. It is recommended that a common approach for the management of the assumptions to be used for the nutrient budgets is adopted across all budgets.

Recommendation: It was observed that different dairy companies supplied core data at different times. It is recommended that targets for delivery of data and the reporting of results are established and implemented.

Recommendation: It was observed that there are a number of possible instances where changes may affect the development of the nutrient budget and how the data is reported. For example;

- dairy farms transfer supply to another dairy company
- farmers transferring between fertiliser suppliers.
- updates that are made to Overseer which could change the nutrient budget totals

In these instances there is no clarity as to what process and protocols are used to manage and report data associated with nutrient budgets. It is recommended that such processes and protocols are determined and developed and applied at a national level.

Recommendation: It was observed that the nutrient budgets were prepared on behalf of the dairy companies. It was further observed that services fertiliser suppliers offer include the provision of nutrient budgets. As such, there is a considerable duplication in terms of data collection and management. It is recommended that consideration be given by the Partners and Friends of the Accord to identify methods that could make these processes more effective and encourage the reuse of data.

DairyNZ is running events focussing on understanding nutrient budgets, nutrient management and the Overseer model. In addition, a number of Fonterra staff are being trained in this area.

(e.g. <http://www.dairynz.co.nz/events/southland-sth-otago/understanding-nutrient-budgets-and-overseer-winton-nov-2014/>).

2.2 Clause:

Assist dairy companies to present meaningful information to their suppliers by collating information from multiple companies for benchmarking.

Findings:

Monthly meetings with Fonterra

Training courses with Fonterra Sustainable Dairy Advisors in riparian management

Training courses for area managers

Recommendation: DairyNZ could consider leading and guiding the nutrient management initiatives as there exists some confusion around the nutrient management commitments of the Water Accord. Some use nutrient budgets (plans) others use actual nutrient figures and in some instances both are used. In addition, requirements of the New Zealand Fertiliser Manufacturers' Code of Practice for Nutrient Management 2007 (referenced in the Sustainable Dairying: Water Accord Conversions Requirements) including requirements for risk identification and assessment, self assessments and record keeping, are not well known and education in this area could be considered.

2.3 Clause:

Enhance the ability to make cost effective changes in farm systems that reduce nutrient loss by:

- Supporting relevant research
- Ensuring quality nutrient management advice is available
- Ensure proven cost effective solutions are available to farmers.

Findings:

DairyNZ is meeting this part of the Accord as part of the list of strategic directives:

- In 2013/14, DairyNZ invested \$3.3 million in Environmental Stewardship and a further \$18.4 million in Research and Development. Major initiatives under the Environmental Stewardship Objective included rollout of Sustainable Milk Plans in the Upper Waikato Catchment (\$450k) and the building of environmental capability across the industry (\$2.4 million; DairyNZ/PGP).
- Key research programmes relating to improving nutrient management include “Forages for Reduced Nitrate Leaching” (\$4.2m; DairyNZ, MBIE, AgResearch, Plant & Food, Lincoln, FAR and Landcare Research) and Pastoral21 (\$8m; DairyNZ, MBIE, Beef & Lamb & Fonterra). P21 is researching profitable farm systems with a low nutrient footprint, whereas FRNL provides the science that will enable farmers to meet nitrogen limits imposed by regional councils in response to the NPS-FM.
- Published by DairyNZ in 2013, “Nutrient Management on Your Dairy Farm” provides farmers with guidance on improving nutrient use efficiency and increases understanding of nutrient cycling in farm systems. It can be accessed at: <http://www.dairynz.co.nz/publications/environment/nutrient-management-on-your-dairy-farm/>

2.4 Clause:

By 31 May 2013 DairyNZ will (in partnership with the fertiliser industry) develop and promote a nutrient management adviser and certification programme aimed at improving the quality and availability of specialists nutrient management advice.

Findings:

The Nutrient Manager Advisor and certification programme has been developed to meet this requirement.

2.5 Clause:

Report actions and resources devoted to research and the development of nutrient management tool development and promotion.

Findings:

Actions and resources devoted to research and the development of nutrient management tool development and promotion were reported internally and in the draft 2013/14 season's report (See clause 2.3 above).

2.6 Clause:

Report progress with the development and implementation of a nutrient management adviser and certification programme including the numbers of people trained and certified as nutrient management advisers (reported annually).

Findings:

At the time of the audit there were 77 rural professionals certified under this scheme. There was evidence that a further 45 advisors were in the process of obtaining certification. The list of providers is: http://www.nmacertification.org.nz/Site/Nutrient_Management/default.aspx. This data will be detailed in the DairyNZ Sustainable Dairying:Water Accord Progress Report for the 2013/14 Season.

2.7 Clause

Assessment of Supporting Partner progress towards their agreed outcomes.

1. Fertiliser companies and NZ Institute of Primary Industry Management will provide nutrient budgeting/management planning services to dairy farmers as part of the commercial relationship between customers and fertiliser supply, and
2. Fertiliser companies will:
 - a) Partner with dairy companies to collect nutrient use/management information from dairy farmers, and
 - b) Ensure 10% of Fertiliser Association of New Zealand member company nutrient management advisers are certified by 31 May 2013 and 50% by 31 May 2014.

Findings:

Nutrient budgeting/management planning services are being provided by fertiliser companies to dairy farmers. However, an accurate figure of the total number of advisors employed by the fertiliser companies has not yet been fully determined.

Recommendation: It is recommended that DairyNZ collate data from the Fertiliser Association of New Zealand relating to the total number of nutrient management advisers.

Section 3. Effluent Management

3.1 Clause:

Build excellence in the design, construction and maintenance of effluent (including sludges and slurries) management infrastructure by developing and/or promoting:

- Industry design and construction code of practice and standards (by 31 November with promotion on-going).

- A training and accreditation scheme for effluent industry (by 31 November 2012 with promotion on-going).
- Pond construction training/design guidance (by 31 November 2012 with promotion on-going).
- A Farm Dairy Effluent (FDE) system warrant of fitness scheme available as a tool for farmers (by 31 May 2014).

Findings:

- The FDE design guide and Code of practice have been finalised and are published on the DairyNZ website.
- There are currently 20 companies accredited, 4 under assessment and another 8 preparing applications under the Effluent Accreditation Programme. Details can be found at <http://www.effluentaccreditation.co.nz/accredited-companies/>
- As of 31 May 2014, nearly 600 effluent industry professionals have attended training courses provided by a number of institutions. For example, 189 professionals have attended the NZWETA Pond Design and Construction course since its inception in 2012.
- The Primary Industry Training Organisation (PITO) runs two industry-designed effluent management courses and report 247 course completions in the 2013/14 year.
- The FDE system warrant of fitness scheme and associated operating procedures have been developed and published.
- A recent survey of 72 effluent service providers indicated high levels of support for the FDE Code of Practice (95% rated the Code as either 'Extremely Relevant' or 'Quite Relevant') and the impact of DairyNZ's programme on farmer motivation to change (80% agreement).

3.2 Clause:

Build excellence in the operation of FDE systems by:

- Ensuring there is high quality training available for those operating FDE systems. Promoting as a matter of good practice that people new to the industry have participated in FDE training (such as that currently offered by Primary Industry Training Organisation) before having responsibility) for operating FDE systems.

Findings:

Refer to the findings documented under clause 3.1 above.

3.3 Clause:

Monitor and report the number of people who have completed effluent designer training certification and the number of companies with accreditation for effluent design services.

Findings:

Refer to the findings documented under clause 3.1 above.

3.4 Clause:

Monitor and report actions and resources promoting the use of certified people in FDE management.

Findings:

Promoting the use of certified people in FDE management takes place via DairyNZ interactions with the various Councils and dairy companies.

3.5 Clause:

Monitor and report the number of people who have completed the Primary Industry Training Organisation effluent management course or other relevant courses established in accordance with DairyNZ's commitment to building excellence in the operation of FDE operating systems.

Findings:

Refer to the findings documented under clause 3.1 above.

3.6 Clause:

Monitor and report the rate of compliance (based on regional council reported significant non-compliance and, to the extent possible, on type of compliance failure) with regional councils' effluent rules and resource consent conditions.

Findings:

Information from the regional council's annual meeting as well as a template was used to collect compliance data from all the councils. The data is presented in graphic format in the draft 2013/14 season report.

Recommendation: While this data is collected by DairyNZ there may be some advantage in ensuring this information is available to the dairy companies. It is recommended that DairyNZ assist the development of networks with the regional councils for the supply of compliance data relating to the farms under supply agreements.

Section 4: Water Use Management

4.1 Clause:

Promote water use efficiency in the farm dairy and in the reticulation of stock drinking water, through in particular promotion of the existing Smart Water Use programme.

Findings:

MilkSmart events have been held; these incorporated the SmartwaterUse on Dairy Farms Programme and took place during the 2013/14 season. Refer:

<http://www.dairynz.co.nz/environment/water-use/smart-water-use/>.

4.2 Clause:

Promote the installation and use of water meters to measure water use in the farm dairy.

Findings:

Refer to the notes under clause 4.1 above.

4.3 Clause:

By 31 May 2015 institute on-farm trials to better understand the volumes of water being used for shed wash down and milk cooling for a range of shed types and under different seasonal and geographical conditions.

Findings:

Water use trials have been initiated on more than 100 dairy farms. (e.g. Canterbury (32 farms), Manawatu (24) and Waikato (52)). Some data from the first farms has been collected during the 2013/14 season. Results of this trial (in conjunction with Massey University) are planned to be reported at the end of the 2014/15 season.

4.4 Clause

Work with, and support, Irrigation NZ on the Irrigation Good Management Practice programme and promote that programme through extension channels.

Findings:

Evidence was sighted that DairyNZ continue to work with Irrigation NZ and promote the Good Management Practice programme.

4.5 Clause

Monitor and report the results of the water use trials.

Findings:

Refer to the notes recorded under clause 4.3 above.

4.6 Clause:

Monitor and report the number of people who have completed irrigation system designer, evaluator and operator training.

Findings:

Two professionals have received certification as irrigation designers. A total of nine irrigation related training courses, with 169 attendees, have been presented during the 2013/14 season.

4.7 Clause:

Monitor and report the number of companies with accreditation for irrigation system design and who hold a National Certificate in Irrigation Evaluation.

Findings:

At the time of the audit, one irrigation company has been accredited for irrigation design.

Recommendation: Consider reporting the total number of irrigation companies operating in New Zealand so that some comparisons can be made.

Section 5: Conversions

5.1 Clause:

Work with rural professionals to ensure the expectations of new dairy farms are understood by those advising on the conversions and factored into the advice given in conversion decision making process.

Findings:

DairyNZ developed a “guide to responsible conversions” for farmers and rural professionals. This guide is available on the company website (<http://www.dairynz.co.nz/farm/farm-construction/responsible-dairy-conversions/>) along with links and references to various other tools and resources. (e.g. Information gathering, planning, and implementation). There are currently 513 rural professionals known to DairyNZ.

5.2 Clause:

Produce material that explains the Industry good practice obligations for conversions (including regionally specific practices) and additional recommended practices (including in particular practices in relation to wetlands). It will also make that material available to relevant organisations (including regional councils, dairy companies and rural professionals).

Findings:

Refer to the notes recorded under clause 5.1.

5.3 Clause:

DairyNZ will monitor and report the initiatives to engage with rural professionals and raise awareness of issues relating to dairy conversions.

Findings:

Refer to the notes recorded under clause 5.1.

Section 6: Monitoring and Reporting

6.1 Clause:

Dairy companies will provide information to DairyNZ/DCANZ in accordance with the timeframes indicated to demonstrate compliance with the commitments made in this Accord.

Dairy companies and DairyNZ will work together to ensure data is collected in a manner that allows for valid aggregation/collation and reporting at appropriate regional and/or catchment scales (noting the need to maintain individual dairy farm confidentiality).

Findings:

This report was available for review by Telarc on 15 October 2014. Nutrient loss and efficiency data was not yet included in the draft report. In addition, it was evident that the preliminary data was being reported by dairy companies in a variety of formats. It is also acknowledged that a further draft of this report has been published since the audit took place and that some of the following Recommendations may have been implemented.

Recommendation: DairyNZ might want to consider the use of a data reporting template which could facilitate reporting at a more detailed level and would serve as guidance to the dairy companies.

Draft Sustainable Dairying: Water Accord Progress report for the 2013/14 season:

Recommendation: The assumption (on page 2) regarding the number of farms represented in the report should be expanded/qualified and it is recommended that it is clearly indicated that Taranaki based supplier data is excluded.

Recommendation: Where dairy companies have encouraged farmers to exclude cattle from wetlands and apply the stock exclusion to third-party grazing land it is recommended that consideration be given to collecting and including this type of data in the consolidated reporting.

Riparian planting:

- In view of significant wetlands not being clearly identified, stock exclusion from significant wetlands was not monitored by dairy companies and was therefore not achieved by 31 May 2014. It is recommended the current statement could communicate this fact more specifically (page 2 3rd bullet from top).
- It is recommended the current statements regarding riparian planting are reviewed (page 2 6th bullet from the top and page 6 middle and bottom). A number of Dairy Companies have yet to start a programme to communicate and guide their suppliers relating to the benefits of riparian planting.
- The page 6 top section statement starting with: "Where verifiable data exists" And ending with "... 24 000 km have stock exclusion" cannot be verified as the 24 000km

number includes unverified Dairy company data. It is recommended that DairyNZ clarify this statement.

Nutrient management:

- It is recommended that it be clearly stated (page 2, 3rd last bullet) that the target to have nutrient management data for 85% of farms by 31 May 2014, and reporting by 30 November 2014 was not achieved as only 59% of farms submitted data.
- It is recommended that DairyNZ collate additional data to verify the statement that dairy companies deployed “a range of actions and resources devoted to the promotion of good practice in nutrient management” (page 3, 1st bullet).
- It is recommended that DairyNZ review the page 7 top statement starting with “Every dairy company has implemented...”. This could not be verified for all dairy companies. One company has requested that the fertiliser companies develop nutrient budgets for their suppliers – and this has not yet been implemented.

Effluent management:

The statements on page 3, 5th bullet from the top and page 8 bottom of the draft report could be supported by some evidence. It is recommended that DairyNZ conduct a verification and comparison of the effluent assessment programmes used by the dairy companies to determine if consistent data can be reported.

Water use management:

The data represented on page 4 2nd bullet and page 16 top cannot be verified with what was presented during the Telarc dairy company reviews and observed during the farm visits. It is recommended that DairyNZ conduct further verification of this data.

Management Systems.

Note: Additional sections of the Clean Water Accord: Audit Standards Checklist (DairyNZ) v5 are reported below. While not a part of the Accord, the audit standard details in Sections 7 through 10 a number of management systems elements that “Shall” be implemented by DairyNZ.

Section 7: Management Support

7.1 Clause:

Senior Management shall ensure that DairyNZ programmes:

- a) Are appropriate to meeting the educational and operational outcomes required for DairyNZ to achieve the desired outcomes of The Water Accord, and
- b) Are appropriate to ensuring the timely and accurate collection of performance data related to The Water Accord from Dairy Companies and other parties (e.g. Support Partners and Regional Councils) within its scope, and
- c) Are appropriate to analysis and reporting of the collected data (above) and
- d) Provide the framework for setting and reviewing on-going related objectives and targets, and
- e) Are documented, implemented and maintained, and
- f) Are communicated to all appropriate persons working for or on behalf of DairyNZ.

Findings:

A number of educational and operational outcomes by DairyNZ to assist in the achievement of the desired outcomes of The Water Accord have been implemented. Initiatives under the general Environmental Stewardship Objective included rollout of Sustainable Milk Plans in the Upper Waikato Catchment and research programmes to improve nutrient management: e.g.

(<http://www.dairynz.co.nz/what-we-do/advocacy-and-policy/environment/upper-waikato-sustainable-milk-project/>), and the “Forages for Reduced Nitrate Leaching” and the P21 project (<http://www.dairynz.co.nz/what-we-do/research/key-projects/pastoral-21/>).

With respect to the timely and accurate collection of performance data related to The Water Accord from Dairy Companies and other parties it was observed that DairyNZ has processes in place and has set timeframes for reporting Accord activities. As the assessment was conducted before the actual deadlines were to be met, there is no there is no ability to verify if the reporting has been timely.

DairyNZ has set frameworks for setting and reviewing on-going related objectives and targets relating to the Accord. Quarterly meetings are held and objectives and targets reviewed at this point.

Recommendation: There are currently no documented processes relating to the Dairy Accord and its activities. It is recommended that DairyNZ identify critical Accord related processes and document these processes in a controlled manner.

Section 8: Planning

8.1 Clause:

DairyNZ shall establish, implement and maintain procedures.

- a) To provide appropriate educational resources (e.g. best practice guidance and case studies) to ensure Dairy Companies and Farms are able to identify and implement operational improvements as desired by The Water Accord (Management of: Riparian, Nutrient, Effluent and Water Use, as well as Dairy Conversions and Reporting on compliance with The Water Accord objectives), and
- b) To encourage (through Dairy Companies) Farmers to make improvements in accordance with the objectives of the Water Accord, and
- c) To collect data on the performance of Farms (highlighting both improvements and failures to achieve objectives), and
- d) To collate and report above data in a form usable in Accord reporting to show progress on achieving the objectives of The Water Accord (while also ensuring data privacy/security), and
- e) To provide feedback to Dairy Companies and Farms on overall (individual and collective) performance relative to The Water Accord. to show progress on achieving the objectives of The Water Accord.

Findings:

DairyNZ has established, implemented and maintained procedures to meet the requirements of the Planning Section of the Accord Audit Standards checklist. Educational resources have been supplied to Dairy Companies and individuals E.g. as noted earlier in the report. Data has been collected and collated relating to objectives of The Water Accord. Data has not been provided to Dairy Companies and Farms on overall performance relative to The Water Accord as the final reports have not been completed at the time of assessment.

Recommendation. It is recommended that DairyNZ document the security protocols used, and the current methods used for securing the privacy of data relating to the accord.

Recommendation. It is recommended that DairyNZ determine and document guidance relating to the content of the summary reports that are to be sent to Dairy Companies and Farms.

Section 9: Implementation

9.1 Clause:

Resources, roles, responsibility and authority

DairyNZ shall ensure the availability of resources essential to establish, implement, maintain and improve compliance with these Audit Criteria. Resources may include human resources and specialised skills, organisation infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

Findings:

Roles, responsibilities, and authorities are defined and documented by DairyNZ in individual Job Descriptions. For example, a requirement to meet Accord requirements is included in the DairyNZ Key Indicators of Success (KIS) for the position of Environment Policy Manager. These indicators are reported and reviewed on a monthly basis (e.g. 31 may 2014 report) and are audited yearly.

9.2 Clause:

Competence, training and awareness

DairyNZ shall ensure that any person(s) performing tasks on its behalf relating to the Water Accord are competent on the basis of appropriate education, training or experience.

Findings:

At present, there are no defined competencies (e.g. education, training or experience) for personnel performing tasks relating to the Water Accord. Performance reviews are completed on an annual basis.

Recommendation: It is recommended that once the procedures have been developed, that core competencies required by staff to complete the processes are identified. It is further recommended that training in the procedures is completed, and records of competency assessment retained.

9.3 Clause:

Control of Documents

Documents required by the Accord project shall be controlled.

DairyNZ shall establish, implement and maintain a procedure(s) to:

- a) Approve documents for adequacy prior to issue
- b) Review and update as necessary and re-approve documents
- c) Ensure that changes and the current revision status of documents are identified
- d) Ensure that relevant versions of applicable documents are available at points of use
- e) Ensure that documents remain legible and readily identifiable
- f) Ensure that documents of external origin determined by DairyNZ to be necessary for the planning and operation of the programmes are identified and their distribution controlled, and
- g) Prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

Findings:

DairyNZ have developed, implemented and maintained procedures for approving and reviewing documents related to the water accord. These activities occur prior to issue to end users. Copies

of documents are made available in both printed and electronic formats. The electronic versions are made available from the DairyNZ website (<http://www.dairynz.co.nz/>). Master copies of all documents are managed using a bespoke Sharepoint document management system. The company has developed and implemented processes for the management and backup of this data.

Recommendation: It is recommended that the company document the processes for managing critical documents (both print and electronic) and the methods by which these are managed and controlled.

Section 10: Checking and Review

10.1 Clause

Monitoring and Measurement

DairyNZ shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant impact on the achievement of The Water Accord objectives.

The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with DairyNZ Water Accord objectives and targets.

Findings:

The Sustainability department within the DairyNZ Strategy and Investment Group include research, development as well as extension and engagement teams. Objectives and key indicators of success (KISS) are defined for all teams and documented performance reporting takes place on a monthly basis.

10.2 Clause

Non-conformity, corrective action and preventive action.

DairyNZ shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity(ies) and for taking corrective action and preventive action.

Findings:

Existing organisational structures are used to report and resolve issues.

Recommendation: Consider the use of a centralised, formal system to log and track resolution of actual and potential nonconformities relating to the dairy accord activities.

10.3 Clause:

Control of Records

Records shall be and remain legible, identifiable and traceable.

Findings:

Formalised record management processes and facilities are used within DairyNZ e.g. HR records are maintained within the PeoplePlus system.

Recommendation: It is recommended that the company document the processes for managing critical records (both print and electronic) and the methods by which these are managed and controlled.

Report on Audit Standard (Dairy Company requirements)

Findings

Section 1: Riparian Management

1.1 Clause:

Implement measures to exclude dairy cattle from permanently flowing waterways and drains greater than 1m in width and deeper than 30cm and significant wetlands on dairy farms.

Findings:

The above mentioned definition of waterways requiring stock exclusion management is being interpreted in varying ways by the different dairy companies. It was observed that during the audits many waterways that were not required to meet the above mentioned definition, were observed to have adequate stock exclusion measures.

Recommendation:

It is recommended that consideration should be given to finding a way to reduce/eliminate the debates around the interpretation of the permanence of a waterway. It is further recommended that verification assessments take place during the dry months of the year where it would assist identifying non permanently flowing waterways and drains.

Findings:

Dairy companies have been promoting stock exclusion on dairy farms for several years. Varying degrees of recording sophistication is used. Dairy companies use a number of different datasets to record exclusion. All records are (or are planned to be) based on spatial maps. In addition, regional councils hold some data; the Taranaki Regional Council maintains far more detailed maps for farms in their region. Consolidation of data from the spatial maps used by dairy companies is less than automated and some errors were identified in the processes used.

Recommendation:

It would be beneficial to have a national spatial mapping service to reap economies of scale and ensure a unified standard of interpretation and recording. The current standard of mapping used by the Taranaki Regional Council could be regarded as an example of such a service.

1.2 Clause:

Encourage farmers to:

- Exclude dairy cattle from all wetlands, and
- Apply the stock exclusion commitment to third-party grazing land as if it were their own land.

Findings:

Stock exclusion from wetlands was in general found to be of adequate standard. However, it was found that the profile and visibility of wetlands were quite low. Data that related to the identification, location, demarcation on maps, and documented information about the wetlands varied between the dairy companies.

Recommendation:

The dairy companies (probably through closer association with regional councils) could include in their company documentation details of significant wetlands associated with their farm suppliers.

Findings:

It was observed that the dairy companies tend to focus on stock exclusion and riparian management on the dairy block only. Full identification of current third party grazing land data has not yet been fully recorded on the mapping tools used by the dairy companies.

Recommendation:

It is recommended that, dairy companies consider increasing the focus on measuring stock exclusion data and riparian management on third party grazing land.

1.3 Clause:

Implement measures to ensure 100% of regular stock crossing points are either bridged or culverted.

Findings:

Regular stock crossings were found to be bridged or culverted.

It was observed that one dairy company had not yet developed a methodology to identify on maps the crossings that were constructed across Accord Waterways. The company is therefore unable to report the percentage of regular stock crossings that have bridges or culverts as required by the Water Accord Riparian Management Reporting Requirements.

Recommendation: As the Accord requires a commitment to ensure 100% of regular stock crossing points are either bridged or culverted, it is recommended that all Accord data is recorded.

Identified as optional in the audit standard, a review of bunded crossings as evidence of “good practice improvements” was made as part of the on farm assessment.

Recommendation: Consideration could be given to more prominent promotion of the importance of bunding and management of effluent collected on bridges/culverts.

1.4 Clause:

Implement measures to achieve progressive planting of the length of waterways within or bounding dairy farms from which there is stock exclusion where planting will contribute to water quality enhancement.

Findings:

Riparian planting guidance, has to date, not received much attention from dairy companies. The Accord commitments require 50% of farms to have riparian management plans by 31 May 2016 and this timeframe could indicate why this has not been a focus area to date.

It has to be reported that farms in the Taranaki region have all received riparian management plans through initiatives of the Taranaki Regional Council. Implementation status varied from zero to 100%.

Recommendation: Successive years of the Accord require the development of Riparian management plans and a reporting requirement. It is recommended that the dairy companies consider developing a database identifying farms and detailing the lengths of waterways that would benefit from a RMP.

Section 2: Nutrient Management

2.1 Clause:

Collect data from all dairy farmers (using agreed protocols and consistent data collection systems) and model N loss and N conversion efficiency from those farms.

Findings:

Most dairy companies have launched initiatives to obtain data on nutrients used on supply farms. Agreements with Ravensdown and Ballance ensure that data is processed via the use of Overseer. However, at the time of the audit, outcomes were not yet available.

On-farm observations indicated few farmer-managed nutrient processes and predictive advice from Ravensdown and Ballance, and on the rare occasion, a professional advisor, directs the process. The abovementioned dairy company initiatives are the first attempts to close the nutrient management process loop by reviewing actuals against relevant benchmarks. It was noted that one dairy company plans to use only the predictive process.

It was observed that processing of data through Overseer is rather complex and often relies on assumptions – the variability in the application of assumptions causes errors and traceability challenges in the development of the budgets.

Observation: A review of the collected data indicates that nutrient management information has not been collected from ALL dairy farms. Therefore figures for N loss and N conversion efficiency have not been fully determined. In addition, it was observed that some data is planned to be of a predictive nature only, as opposed to modelling actual data from the farms.

Recommendation: Nutrient budgets are prepared on behalf of the dairy companies. It was identified that services fertiliser suppliers offer include the provision of nutrient budgets. As such, there is some duplication in terms of data collection and management. It is recommended that consideration be given by the Partners and Friends of the Accord to identify methods that could make these processes more effective and encourage the reuse of data. The industry could consider streamlining the nutrient management data reporting process to achieve economies of scale and increase effectiveness and accuracy.

Recommendation: It was observed that there were a number of different versions of templates that were used by the various dairy companies to supply the data for the nutrient budgets. It is recommended that a common template for all providers of data is adopted.

Recommendation: While the nutrient budget teams had protocols for managing incomplete data, it was observed that different dairy companies had different expectations with regard to assumptions to be made when there was incomplete data. It is recommended that a common approach for the management of the assumptions to be used for the nutrient budgets is adopted across all budgets.

Recommendation: It was observed that different dairy companies supplied core data at different times. It is recommended that targets for delivery of data and the reporting of results are established and implemented.

Recommendation: It was observed that there are a number of possible instances where changes may affect the development of the nutrient budget and how the data is reported. For example;

- dairy farms transfer supply to another dairy company
- farmers transferring between fertiliser suppliers.
- updates that are made to Overseer which could change the nutrient budget totals

In these instances there is no clarity as to what process and protocols are used to manage and report data associated with nutrient budgets. It is recommended that such processes and protocols are determined and developed.

2.2 Clause:

Provide N loss and N conversion efficiency performance information back to dairy farmers along with performance benchmarking.

Findings:

As indicated above, those dairy companies that have collected actual nutrient management data, have created reporting templates to communicate N loss and N conversion efficiency information back to farmers. At the time of audit, not all farms had had this information reported back to them.

2.3 Clause:

In catchments recorded in an operative regional plan as being fully allocated in nutrient assimilative capacity terms, either:

- Reduce, as appropriate, the average per hectare N and/or P loss, and/or
- Engage in catchment programmes that seek to improve water quality outcomes in receiving waters using specified on farm and/or catchment scale good management practices.

Findings:

There were regional variations as to the references and information regarding fully allocated areas encountered during farm visits. In some regions, there was clear information available regarding nutrient allocation (e.g. Canterbury, Southland). Specified on farm and/or catchment scale good management practices were observed in such areas. In other regions, the information available indicated that limits could be implemented in the future.

2.4 Clause:

Manage P loss risk associated with sediment discharge, runoff and overland flows.

Findings:

In areas where resource consents were issued, arrangements to manage sediment, runoff and overland flows were clearly defined. However, the majority of farms visited operated under permitted activity rules and rely on advice from the dairy companies and other advisors. In general, dairy companies had adequate processes in place to follow-up and review the advice given.

Section 3. Effluent Management

3.1 Clause:

Arrange for the assessment of supplier dairy farms ("Farm") on a 3 yearly basis to review compliance (or ability to comply) with regulatory requirements (resource consents and regional plan rules).

Findings:

All dairy companies use their own personnel and/or external suppliers (e.g. AsureQuality and QCONZ), who have been performing the dairy shed food safety audits, to also review environmental management arrangements. Review of effluent management is included. Dairy companies use this process to identify effluent management related issues (e.g. nutrient management, discharge management etc), which are then reported to the dairy company and an improvement process is launched.

Recommendation: It is recommended that personnel and external suppliers (such as AsureQuality and QCONZ) that play a critical role in identifying effluent related issues, attend the DairyNZ effluent systems design and management courses.

3.2 Clause:

For dairy farms identified as being at risk of non-compliance, a farm specific management plan shall be put in place to ensure 365 day compliance.

An annual assessment will be undertaken until such time as the management plan is fully implemented and non-compliance risk is remedied.

Findings:

Through annual assessments performed by their own personnel and/or external suppliers, dairy companies are informed of potential issues. It was found that dairy companies responded appropriately to alerts regarding non-compliances or risks thereof. Documented improvement plans detailing actions to be taken are generated and due dates are identified and monitored. Challenges were identified during the audit of the follow up and closing out of the identified corrective and preventive actions.

Recommendation: Dairy companies should ensure that, similar to food safety issues, environmental issues are logged and tracked via a formalised system with escalation properties.

3.3 Clause:

By 31 May 2014 introduce programmes to reduce reliance on discharges to water from two pond farm dairy effluent (FDE).

(FDE) treatment systems in areas where land application would result in improved water quality outcomes.

Findings:

Some of the dairy farms visited were observed to discharge to water via a two pond system through a consented/permitted process. Other effluent collection and settlement designs are also used. In general, individual regional and district council requirements manage this issue. Programmes such as the dairy company assessments were observed to assist in the identification of two pond FDE systems that would not meet requirements. However, the regional councils are only friends of the accord and are not accountable for delivering on Accord commitments.

Recommendation: It is recommended that accountability arrangements around reducing treated effluent discharge to water from two pond farm dairy effluent systems be reviewed by the dairy companies and regional councils to ensure reliance on discharges of treated effluent to water from two pond farm dairy effluent (FDE) is reduced.

Section 4: Water Use Management

4.1 Clause:

The Dairy Company will introduce programmes to assist dairy farmers to meet national and local regulation controlling water takes.

Findings:

In view of the Accord commitment of having 85% of all dairy farms being equipped with water meters by 2020, dairy companies have not yet launched any major initiatives to address this commitment. Some dairy companies have commenced recording the type and applications of water meters on farms. However, there is no consistent approach, and the definition of a water meter varied between companies.

Recommendation: It is recommended that dairy companies design systems to collect data regarding water meter installations and start designing advisory programmes/deploying programmes developed by DairyNZ.

Recommendation: The Accord requires that Dairy Companies report by 2020 on the number of dairy farms that have water meters installed. However, there is no clarity as to what type of water meters should be counted. E.g. the dairy shed, platform and irrigation on a farm could have up to three separate meters. It is recommended that this aspect of the Accord is clarified.

4.2 Clause:

The Dairy Company will commit to requiring 85% of all dairy farms (including all significant water users) to install water meters by 2020.

Findings:

See the comments under section 4 clause 4.1.

Section 5: Conversions**5.1 Clause:**

From 31 May 2013, ensure that new dairy farm conversions comply with the following standards before milk collection commences:

- Dairy farms must have systems in place to manage all sources of effluent to ensure compliance with relevant regulatory obligations 365 days a year.
- All animal races are to have bridges or culverts when crossing all waterways and drains.
- Animals are to be excluded from waterways and drains that are at any point within the boundary of the dairy farm wider than one metre and deeper than 30cm.
- Dairy farms must have a nutrient management plan in place.

Findings:

During the 2013/14 season there were around one per cent of the total number of farms converted. This includes conversions as defined by the Accord, re-starts, and wins (from opposition companies). In general, conversions were managed as required and firm processes are in place.

Observation: The Dairy Accord requires that all dairy conversions have a “Nutrient Management Plan” that meets the requirements of the New Zealand Fertiliser Manufacturers Research Association Code of Practice for Nutrient Management 2007. This COP was not used as a basis for a NMP by any of the converted farms.

Recommendation: It is noted that a later version of the Code of Practice for Nutrient Management (2013) had been published. It is recommended that clarity is sought in the use of the code.

Recommendation: Although outside of Accord commitments, it is recommended that dairy companies could consider including dairy farm change of ownership as a “conversion”. This

would have the effect of initiating the requirements of this section of the Accord before supply commences and act to further the aims of the Accord.

Section 6: Monitoring and Reporting

6.1 Clause:

Dairy Companies will provide information to DairyNZ/DCANZ in accordance with the time frames indicated to demonstrate compliance with the commitments made in this Accord.

Dairy Companies and DairyNZ will work together to ensure data is collected in a manner that allows for valid aggregation/collation and reporting at appropriate regional and/or catchment scales (noting the need to maintain individual dairy farm confidentiality).

Findings:

Dairy companies used varying reporting systems and approaches to report progress on Accord commitments. At the time of the audit, not all data was due to be submitted to DairyNZ (e.g. nutrient management data). However, most data was supplied to DairyNZ and available for review on 17 October 2014.

The data was provided in different formats by the dairy companies and as a whole, was inconsistent in its display and collation. There was no pre-developed, standard template and companies used formats as thought fit.

Recommendation:

It is strongly recommended that agreement regarding standardised reporting regarding Water Accord commitments be sought and implemented as soon as practicable to ensure data for the 2014/15 season can be collated at a detailed level.

Section 7: Management Support

7.1 Clause:

Senior management shall ensure that Dairy Company programmes:

- a) Are appropriate for meeting the educational and operational outcomes required for dairy farms to achieve the desired outcomes of the Water Accord, and
- b) Are appropriate to ensure the timely and accurate collection of performance data related to the Water Accord from dairy farms within its scope, and
- c) Are appropriate to analysis and reporting of the collected data (above), and
- d) Provide the framework for setting and reviewing ongoing related objectives and targets, and
- e) Are documented, implemented and maintained, and
- f) Are communicated to all appropriate persons working for or on behalf of the Dairy Company.

Findings:

It was found that dairy companies had provided adequate resources to implement and manage the Water Accord commitments. However, some further refining in the training (e.g. nutrient and effluent management), awareness (wetlands and fully allocated areas) and data management domains would be beneficial. Human resources seem to be somewhat stretched and under pressure as reflected in farm:staff member ratios and availability for Accord related meetings (e.g. farm visits).

Dairy companies set frameworks for setting and reviewing on-going related objectives and targets relating to the Accord. Regular meetings were held and objectives and targets reviewed at that time.

Section 8: Planning

8.1 Clause:

The Dairy Company shall establish, implement and maintain procedures.

- a) To provide appropriate educational resources (e.g. good practice guidance and case studies) to ensure dairy farms are able to identify and implement operational improvements as desired by the Water Accord (Management of: riparian, nutrient, effluent, and water use, as well as dairy conversions and reporting on compliance with the Water Accord objectives), and
- b) To encourage dairy farms to make improvements in accordance with the objectives of the Water Accord, and
- c) To collect data on the performance of dairy farms (highlighting both improvements and failures to achieve objectives), and
- d) To collate and report above data in a form usable by DairyNZ in reporting progress on achieving the objectives of the Water Accord (while also ensuring data privacy/security), and
- e) To provide feedback to dairy farms on overall (individual and collective) performance relative to the Water Accord.

Findings:

Dairy companies provide a lot of environmental and asset management information to farmers in formats ranging from electronic and hard copy text, through to meetings and discussion groups. Some farmers have referred to somewhat of information overload. Terminology used is generic and not necessarily Water Accord “speak”. Structured feedback regarding performance relative to Water Accord commitments has not yet been launched but may be detailed in the reporting back to farmers of programme specific results (e.g. nutrient management).

Recommendation:

Dairy companies might want to consider developing some form of consolidated Water Accord feedback to farmers. Conclusion of this first round of Telarc verification assessments could be used as trigger.

Section 9: Implementation

9.1 Clause:

Resources, roles, responsibility and authority

The Dairy Company shall ensure the availability of resources essential to establish, implement, maintain and improve compliance with these Audit Criteria. Resources may include human resources and specialised skills, Dairy Company infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

Findings:

Roles, responsibilities, and authorities were generally defined and documented by the dairy companies in individual Job Descriptions and performance against stated objectives managed as part of the internal HR processes.

9.2 Clause:

Competence, training and awareness

The Dairy Company shall ensure that any person(s) performing tasks relating to the Water Accord are competent on the basis of appropriate education, training or experience.

Criteria:

1. The Dairy Company needs to ensure that those people performing tasks that have the potential to affect the outcome of the project are competent to perform those tasks.
2. 'Competence' may come from relevant education, training or experience.

Findings:

Refer to the comments detailed under section 7 and Clause 9.1

Recommendation: It is recommended that once Accord procedures have been developed, that core competencies required by staff to complete the processes are identified. It is further recommended that training in the procedures is completed, and records of competency assessment retained.

9.3 Clause:

Control of Documents

Documents required by the Accord project shall be controlled.

The Dairy company shall establish, implement and maintain a procedure(s) to:

- a) Approve documents for adequacy prior to issue,
- b) Review and update as necessary and reapprove documents,
- c) Ensure that changes and the current revision status of documents are identified,
- d) Ensure that relevant versions of applicable documents are available at points of use,
- e) Ensure that documents remain legible and readily identifiable,
- f) Ensure that documents of external origin determined by the Dairy Company to be necessary for the planning and operation of the programmes are identified and their distribution controlled, and
- g) Prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

Findings:

Approaches to control of documents varied amongst dairy companies and not all companies used formalised systems. However, all information required for the Telarc verification assessment were retrievable and available when requested. At company specific levels, some recommendations regarding control approaches were communicated.

Recommendation: It is recommended that the dairy companies document the processes for managing critical documents (both print and electronic) relating to the Accord and the methods by which these are managed and controlled.

Section 10: Checking and Review

10.1 Clause

Monitoring and Measurement

The Dairy Company shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant impact on the achievement of the Water Accord objectives.

The procedure (s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the Dairy Company's associated objectives and targets.

Findings:

All dairy companies have a management structure where staff involved in the Water Accord processes, reported to managers around key performance areas on a frequent basis.

10.2 Clause**Non-conformity, corrective action and preventive action.**

The Dairy Company shall establish, implement and maintain a procedure(s) for dealing with potential and actual non-conformity(ies) and for taking corrective action and preventive action).

Findings:

In general, dairy companies maintained processes and procedures for managing potential and actual non-conformities. However, as indicated earlier in this report, some instances where follow-up was challenging, were identified.

Recommendation: In view of all dairy companies having firm procedures and systems to log and track food safety related issues, it is recommended that the company develop an issues (non conformance) process to manage and make transparent identified issues associated with this process that require action. This process could also manage and record the specific measures taken (including actions, timeframes and responsibilities) as well as a review of the effectiveness of the resultant action.

10.3 Clause:**Control of Records**

Records shall be and remain legible, identifiable and traceable.

Findings:

Similar to document control, most records required to perform the Telarc verification assessment were readily available despite not all dairy companies using formalised record management systems.

Recommendation: It is recommended that the dairy companies document the processes for managing critical records (both print and electronic) relating to the Accord and the methods by which these are managed and controlled.

Appendices

Individual reports noting the audit findings at the following companies.

- Fonterra Co-operative Group Limited
- Synlait Limited
- Miraka Limited
- Open Country Dairy Limited
- Tatua Co-Operative Dairy Company Limited
- Ravensdown Fertiliser Co-operative Limited
- Ballance Agri-Nutrients Limited