MINUTES OF THE KAIKŌURA ZONE WATER COMMITTEE MEETING HELD AT 12.30PM ON WEDNESDAY 2nd OCTOBER 2019 AT KAIKŌURA COUNCIL BUILDING – COUNCIL CHAMBERS.

PRESENT: A Boyd, G Solomon, N McArthur, R Roche, T Howard (Chair), Councillor S Lowndes, S Bragg, T Sonal, T Blunt, C McConchie

IN ATTENDANCE: K Heays, J Hoggard, H Melville, P Bradshaw (Kaikōura ECan), K Whitwell, Kimberley Dynes & Matt Dodson, Stephen Bragg and M Griffin (ECan)

APOLOGIES: J Murray, C Harnett

Moved by R Roche, seconded by G Solomon and resolved that apologies be accepted.

KARAKIA – Stephen Bragg

1. **ECan Science Monitoring – Briefing**
   please refer to the attached copy of this presentation – agenda item 7-1

   Kimberley Dynes (ECan Science) provided the committee with an overview of the science monitoring program undertaken by ECan annually, with the main objective to support the committee in determining priorities for the 2020 work program. Directly tying in with the ZIP priority outcomes, the committee was invited to consider how to best ensure these priority outcomes are maintained, what monitoring tools are available to achieve this, and which of these are currently used.

   In terms of Freshwater Outcomes, water quality monitoring is indicative of the holistic approach applied in the science monitoring program; aimed at managing effects from nutrients on the overall water quality and stream ecosystem health. K Dynes also emphasized that the "values" of the waterway are dependent on considerations from the community in relation to use and preferred outcomes. She added 'Ideal' outcomes, from a scientific point of view, are identified by improved invertebrate communities, decreased aquatic (macrophyte) cover, and 'clean' gravels free of sediment. Spring-fed streams are generally more vulnerable to intensive land use while contaminants tend to 'hang around' more. This was noted with reference to the Kaikoura plains red zone.

   With regards to the current state of surface water, measurements of different elements of water quality were shown in comparison to Land and Water Regional Plan (LWRP) Freshwater Outcomes and nitrate toxicity levels. This highlighted a number of key issues in local catchments. The measurements were conducted as part of the regional monitoring program with annual testing carried out each summer over five years' time on five sites identified.

Key issues identified were:
(**1**) Quantitative Macroinvertebrate Community Index (QMCI) is indicative of water quality and habitat. As macroinvertebrate communities in waterways respond to changes in water quality, the QMCI is known to be a strong indicator of habitat and water quality and, therefore, a reflection of the overall state of the waterway. QMCI results were particularly poor on testing sites on Beach Rd (Middle Creek), Mill Rd (Lyell Creek) and Morrisons Rd (Warren Creek).

(**2**) Sediment cover, identified as particularly important for aquatic habitat and fish spawning, frequently exceeded plan limits on all five testing sites. This indicates a loss of habitat, which is reflected in poor QMCI results.

(**3**) Macrophyte covers often exceeded plan limits in all but one of the testing sites and indicate particular issues in Lyell Creek. It was pointed out that these results are likely an underestimate due to aquatic weed clearance. Increased macrophyte covers are known to have a detrimental effect on overall supporting capacity for stream life due to oxygen fluctuations.

K Heays noted there have been recent conversations around potential community involvement in local testing across the district to further support this regional monitoring. T Sonal questioned if there was a need for more regular testing, while it was pointed out that monitoring of potential changes could inform (local) action and policy.

N McArthur enquired about current baseline monitoring of nutrient levels at the spring heads. Kimberley noted that the current testing sites have been chosen because they give a good indication of the catchment as a whole, rather than nutrient levels at one particular spot. A follow-up discussion is to be held within the Zone Committee around baseline level testing.

Nitrate concentrations have remained below the LWRP Nitrate toxicity limits. K Dynes pointed out that toxicity limits do vary for different species, with some freshwater species known to be more susceptible to nitrates. Overall, nitrate concentrations appear fairly steady while relatively minor fluctuations can be explained in terms of droughts and other weather events. It was noted that nutrient management helps to maintain and improve nitrate concentrations, thus addressing the three identified key issues would address nitrate levels by default. The importance of the Red Zone was emphasized in this process, as it provided a means to address and manage these issues.

G Solomon raised the question whether the Committee would be able to revise nitrate limits for the district. M Griffin clarified that this would need to go through the Plan Change process, which has been deferred to 2027 for Kaikoura. Consequently, it was clarified, from ECan’s perspective, money is best spent on on-the-ground action at this stage with the recommendations of the Lyell Catchment Recovery Plan providing a sound basis for action and funding.

Referring to the Nitrate toxicity annual median table presented to the committee, showing data from the past ten years, T Blunt requested nitrate data of the previous 20 years to be presented in the same format. Kimberley and M Griffin will follow up, to be revisited in the February 2020 meeting.

Hydrogeologist Matt Dodson (ECan Groundwater Team Leader) then presented the committee with an update on the current state of groundwater. Groundwater nutrient levels are measured annually, in spring, when groundwater levels are known to fluctuate significantly less than surface water levels. Measurements across the Kaikōura District indicate relatively good groundwater levels, particularly in comparison to other areas across the South Island. Further to this comparison, the negative impact of increased development on water quality was emphasized.

The Elms well was identified as the only well in the District to have measured above 5% in E. coli detection between 1999-2018, T Sonal voiced her concerns around this.

Committee members requested more clear maps for E. coli detection and Nitrate distribution levels across the District.

C McConchie requested specific information on the exact depth of the wells. While they are known to be less than 30m, follow up is required on the exact depths.

C McConchie also requested District information on underground aquifers. While M Dodson was able to provide some background on the geological profile of the Kaikōura District, he noted that there is no current mapping data on the separate underground aquifers across the main aquifer identified in the Zone. He pointed out that it would be a very expensive process with no guarantee of clear useful data, given the complex geological structure of the area.

N McArthur asked if more testing sites across the District would be beneficial. G Solomon questioned the need for additional testing sites when current data already shows that the waters are degraded, and additional testing sites would likely not add to this.

T Sonal suggested a one-off testing at the top of Lyell Creek and reiterated her concerns around the Elms well, suggesting the committee inform the owner of the testing results. T Howard noted that there are no significant health issues around the Elms well as it is not used for drinking water.

M Dodson noted that localized interventions will likely be insufficient on their own and emphasized the need to get everyone in the catchment on board and working together to address these issues.

N McArthur and T Blunt agreed they would like to have more testing points to attempt to accurately locate where the issues are arising. In response to this, M Dodson and K Dynes noted that due to the interconnectedness of groundwater and surface water, it would prove extremely challenging to determine specific sites where intervention will result in improved effects on the water quality for the catchment overall. Aside from this, it was pointed out that any additional testing will not necessarily add significant new understanding to what is currently known about the existing issues.

T Howard suggested that, seeing as no significant nitrate or phosphate issues have been identified in the Zone, it would make sense to focus on E. coli issues by continuation of plantings and further support for habitat recovery.

M Griffin brought the discussion back to the main question around tools currently available and/or in use to ensure protection of ZIP priority outcomes.

The red zone was identified as a particularly powerful management tool, as it identifies and highlights vulnerable waterways and catchments and sets higher requirements for some consented activity in this zone. The suggestion from the ECan science team was to continue working towards decreasing the current water quality status by addressing the key issues identified.
In terms of managing nitrate limits, M Griffin provided the example from the Waimakariri where the Zone Committee made recommendations in their ZIP Addendum (for Plan Change 7 of the LWRP) to make a distinction between a nitrate priority zone and a run-off priority zone. In the nitrate priority zone, further levels/stages of nitrate reduction are proposed, going beyond the red zone rules currently set in the LWRP. Questions were raised around the implications of these stages of nitrate reduction, and the data used. M Griffin and M Dodson clarified that the modelling used is based on current state data developed for the Waimakariri Plan Change, with reduction stages indicating the change of land use and de-intensification required over time. They added that these nitrate and run-off priority zones also reflect the soil structure and geological variations of each area.

In response to T Sonal's question regarding options to address particular issues around E. coli contamination, K Dynes noted that riparian planting and planting of overland flowpaths are known to be effective in prevention of contamination, especially in conjunction with fencing set-backs and concentration of planting around drainage. S Lowndes added that planting on northern banks of streams is known to help create valuable shade for instream species, while planting of overland flowpaths and fencing set-backs are helpful in addressing sediment deposition.

T Sonal suggested pursuance of an additional $200k in funding to be put towards identified plants that would help get these improvements, particularly plantings in Warren Creek and Lyell Creek around drains, as well as labor costs of this work and improvement of the Elms well.

This topic will be revisited in the February 2020 meeting.

2. COMMITTEE CHECK-IN & ORDER OF BUSINESS

Urgent business – N/A

Confirmation minutes

P.9 (Under General Business – 5) – T Blunt on animal welfare
T Blunt noted use of ambiguous wording in this paragraph and would like to have clarified that he was speaking about the increase of animal welfare issues and environmental issues with regard to dairy cows.

P. 8 – Update on Kotahitanga mō te taiou strategy
G Solomon noted that use of the word "fund" is not applicable here and should be changed to "Strategy".

Moved by A Boyd, seconded N McArthur and resolved that the minutes of the Kaikōura Zone Water Committee meeting held on 4th September 2019 be confirmed a true and accurate record.

Matters arising

Drawing on personal experience, G Solomon shared her concerns around potential resistance and attitudes Makarini Rupene might have encountered during his work as Cultural Land Management Advisor in the Zone and raised the question on how the Zone Committee can best support him in his role and delivery of his message to local community and farmers. T Blunt noted he had spoken with Makarini directly after attending his Shed Talk on Mahinga Kai and had offered to accompany him on his visits to local farmers for support.

S Bragg was able to provide background on Makarini's role and the challenges he finds himself in when often required to function and perform within two world views. He assured the committee that the well-being component of Makarini's employment is taken very seriously, maintaining awareness of the demands of his position within the organization, iwi and wider community.

K Heays noted that all staff-wellbeing is and has been a priority within the local ECan Zone Delivery team as well and collaboration, reciprocal support and open communication and highly valued and prioritized. He noted that in a recent hui Makarini commented on the positive experiences he has had during his work in the zone, with many local farmers seemingly opened up to the concept and values of Mahinga Kai as part of Farm Environment Plan (FEP) work. K Heays verified that Makarini is currently also working with Fonterra and will be moving into the Waimakariri zone to extend his engagement with farmers on FEP work.

The committee unanimously agreed that public acknowledgement of the great work Makarini has done in the zone and the successes resulting from this would be in place. It was suggested that M Griffin and T Howard send a big thank you to Makarini directly on behalf of the committee, crediting his magnificent work in supporting local farmers on their way forward and expressing the committee's solidarity with his message and efforts around Mahinga Kai values.

C McConchie noted that local farmers will likely need to be reminded that the FEP is a 'live' document. The committee agrees that it will be important to keep the Comms live, celebrate successes, and consistently continue to get the word out. K Heays noted that this will be a big component of P Bradshaw's work within the local Zone Delivery team.

G Solomon noted that an action list may be useful at this stage. The following actions from the previous meeting were noted to be readdressed:
- Septic Tank Survey – update from K Heays
- Silage pit follow-up – as requested by C McConchie

Register of Interests
The Register of Interest has been updated with details from G Solomon and was confirmed as accurate in the meeting. The committee was reminded of the intended purpose of the Register of Interest and the importance of keeping it a 'live' document; any changes in personal situation are to be notified directly.

R Roche noted that he is currently employer by NCTIR, who will be presenting later in the meeting.

2.1 Opportunity for the public to speak
N/A

3. **Committee updates**

T Howard provided his report on the previous CWMS Regional Committee meeting.

S Lowndes noted that even though we have seen that nitrate is not the biggest problem, a potential nitrate probe trail in Kaikoura in the form of a partnership between individual farmers and ECan could have importance for farmers in other catchments in the Region. T Howard acknowledged that he would like to see a trial, although the ultimate aim is to have monitoring occurring at each boundary. They agreed that a nitrate probe trail would be a good first step in getting real-time data, providing scope to improve confident limits based on more data.

The nitrate probe trial is currently held up by lack of funding. The cost per probe was estimated at $8-9k, with an estimated ongoing cost between $1-3k per year. These estimates were provided by T Blunt.

An action point for the next meeting is to look at the scale and funding options for a possible nitrate probe trial in Kaikoura. With background information provided by the ECan Science Team, the aim is to have a clearer idea of how a trial could fit in the current monitoring program. Clarification is required in terms of money available to spend in order to determine the scope and location(s) of a potential trial.

C McConchie noted that there is no current data on the percentage of nitrate entering groundwater from specific farming practices and suggested looking into getting information from local farmers in terms of how much Urea fertilizer is used. He noted Kaikoura could be a frontrunner by being the first district in NZ to fully cut out use of Urea. T Blunt thought this to be unrealistic as it would have major implications for food production and market.

Matt Dodson noted that a nitrate probe trial has been initiated in Ashburton with two probes installed. The technology is developing and requires further fine-tuning. He also pointed out that measuring nitrate in groundwater catchments is complex as it cannot be measured easily from one specific point.

G Solomon requested all information on nitrate probes to be put together and shared with the committee before decision making on a potential trial in the district.

Comms - community updates

K Whitwell provided the committee with an overview of what is currently on the Comms radar, including:

- An update on local wetland work to be published in the next two days through all ECan and KDC channels.
- A piece on the recent Lyell Creek planting and beach clean-up day organized in collaboration between KDC and ECan; to be published in the coming week through all ECan and KDC channels. It was noted that a number of committee members had also been present for parts of this initiative, K Whitwell will add this in the publication.
- A link will be added in the monthly KDC Newsletter to the latest WZC page.
- Currently aiming to get a full updated Comms strategy/plan for the next meeting

G Solomon suggested putting together a feature on Makarini Rupene and his work around Mahinga Kai. K Whitwell was open to this idea, though will not be able to carry this out herself while her current employment for one day per week does not allow her the time at this stage.

K Heays provided the zone with a brief Zone Delivery update.

- Following the youth engagement workshop and discussion in the September19 meeting, a meeting with the local high school principal has taken place to discuss options around environmental studies in the local curriculum. Present at this meeting were K Heays, T Howard, and N McArthur. It was agreed that K Heays and T Howard will put together a list of topics that are going on in the District that could be of value to the curriculum. As there will be costs associated with the localized curriculum, it was suggested to be tied it in with the local ECan monitoring as part of community involvement.

G Solomon suggested to hold a future KWZC meeting at the high school as part of youth engagement initiatives.

- A $50k fund has been verbally confirmed for Waiau-Toa weed control; recommendations from the Zone Committee will be taken on board.

C McConchie noted that it is better not to spray gorse after the longest day as effects will be minimal.

- Outside funding has been confirmed from Long Term Plan fundraiser; this will be utilized for major works along the North-South branch of the Lyell as part of the “Love the Lyell” initiative.

T Sonal asked if it would be possible to put a walkway through this part. K Heays said that this would not be an option as it is private land.

15.10 A Very Special Afternoon Tea

The committee thanked Councilor S Lowndes, Mayor W Gray and Councilor C Harnett for their valuable input during their time with the committee.

S Lowndes acknowledged his appreciation of his time on this committee and recommended establishing a connection with Banks Peninsula Zone Committee based on their similarities in community size and preferred focus on work on the ground. It was noted the Watershed event in April 2020 may present on opportunity for members of these committees to share some time together.

4. **NCTIR – briefing**
   please refer to the attached copy of this presentation – agenda item 7-2

On behalf of NCTIR, Dr Gareth Taylor (Project Ecologist) and Ross Glubb (Environmental Advisor) provided the committee with an overview of the work NCTIR has and is carrying out and specific ecological considerations taken into account during the works.

With additional funding secured, NCTIR is continuing repair works following the 2016 earthquake. More work is carried out specifically on Inland Road, with an estimated 50 projects running by Christmas 2019. Ecological considerations in planning and execution of the works are required, often involving high value river systems sustaining high numbers of threatened species. Management of these risks evolve around avoidance, mitigation, and remediation of negative effects on rivers and habitats.

Where possible, NCTIR works aim to avoid impacts on fish migration, nesting season or particular (lizard) habitat. Working together with DOC, they may obtain wildlife permits to salvage and relocate lizards if entering local habitat cannot be avoided.

Use of temporary work platforms and preferred entrance through lesser value non-native vegetation are examples of other strategies applied to avoid negative impacts.

Where it is not possible to avoid certain impacts on local systems NCTIR aims to mitigate and minimize impacts across the projects by minimizing the duration of works, timing the works during key periods, shortening of works particularly during spawning period, relocation of affected animals, reducing the areas of work, installation of temporary infrastructure to provide passage, use of appropriate and clean equipment and management around spread of disturbance.
NCTIR aims to also remedy potential effects by reinstating environments and implement improvements where possible, such as adding fish passages, additional plantings of native species and providing new habitat elsewhere if required. The aim is to return the work sites to what it was previously, or improve, where possible.

In implementation of Control Plans they include on Environmental Plans as well as Health & Safety.

N McArthur asked if there will be a written legacy to be shared with regards to species and habitat identified across the District. Dr Taylor noted that freshwater fish data has consistently been shared and uploaded throughout the projects, while data on lizard species and habitat has been collected but are protected by DOC. This data is publicly available though only by approval from DOC as there have been issues with poaching.

G Solomon enquired about consideration of cultural values in planning and implementation of projects. It was clarified that there is a section within the NCTIR organization that monitors cultural value reports; these are shared and taken into consideration in putting together the final project plans together with H&S, Environmental Plans, etc.

G Solomon noted that rivers often provide direct access to mahinga kai sources and asked if this access is accommodated in the plans. It was clarified that there is usually no change in access along the entire river system, though continuation of access is taken into account where required.

T Sonal enquired about the types of frogs encountered during the works. Dr Taylor said that only bell frogs and whistling tree frogs have been found, which are not indigenous species. He noted that there is no protection on these species under the relevant acts.

C McConchie voiced his disdain over a particular NCTIR work site he had witnessed last year where road work material had been washed away after a rain event and was not tidied up fast enough. He asked whether high peak flows are being monitored to prevent this from happening again. Ross Glubb confirmed that peak flow floods are monitored, and risk assessments made prior to any project. He also acknowledged the work site C McConchie had raised and noted the area was tidies up following the rain event.

C McConchie enquired about river diversions at the Hāpuku NCTIR work site. Dr Taylor and Mr Glubb clarified that NCTIR has not implemented any river diversions at the Hāpuku work site and no direct interference with the Hāpuku river has been required for the works to be carried out.

It was clarified that all NCTIR projects are carried out under existing consents and that any new consents required will need to go through the standard application process.

Referring to fish passages implemented by NCTIR at the Ohau Stream, T Howard asked why this is not standard practice for any site.

Dr Taylor clarified that fish passage guidelines do not work for all situations, though the aim is to work everything by the standard guidelines. The circumstances in post-quake Kaikoura have proven fairly unique and challenging due to sudden significant landscape changes. He stressed that in the current state everyone should be working with fish passage guidelines.

N McArthur reiterated her wish to see a legacy NCTIR document.

M Griffin suggested inclusion of a NCTIR site visit during the December 2019 Waiau-Toa field trip. The Clarence bridge was suggested as a suitable site to visit.

There being no further business, the meeting closed at 16.20